

10/607631

FILE 'HCAPLUS' ENTERED AT 12:18:12 ON 22 NOV 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 22 Nov 2005 VOL 143 ISS 22
FILE LAST UPDATED: 21 Nov 2005 (20051121/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

L18 34 SEA FILE=HCAPLUS ABB=ON PLU=ON (MYCOPLASM? OR M) (W)HYOPNE
UMON? AND (MUTAT? OR MUTANT? OR MUTAGEN? OR POLYMORPH? OR
POLY MORPH?)

L19 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND IMMUNOGEN?

L18 34 SEA FILE=HCAPLUS ABB=ON PLU=ON (MYCOPLASM? OR M) (W)HYOPNE
UMON? AND (MUTAT? OR MUTANT? OR MUTAGEN? OR POLYMORPH? OR
POLY MORPH?)

L20 20 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND (SWINE OR PORCINE
OR PIG OR HOG OR PIGLET)

L21 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 AND VECTOR

L18 34 SEA FILE=HCAPLUS ABB=ON PLU=ON (MYCOPLASM? OR M) (W)HYOPNE
UMON? AND (MUTAT? OR MUTANT? OR MUTAGEN? OR POLYMORPH? OR
POLY MORPH?)

L22 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND ADMIN?

L23 13 L19 OR L21 OR L22

L23 ANSWER 1 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 09 Sep 2004

ACCESSION NUMBER: 2004:734567 HCAPLUS

DOCUMENT NUMBER: 141:362268

TITLE: **Mycoplasma hyopneumoniae** p65
surface lipoprotein is a lipolytic enzyme with a
preference for shorter-chain fatty acids

AUTHOR(S): Schmidt, Jono A.; Browning, Glenn F.; Markham,
Philip F.

CORPORATE SOURCE: Department of Veterinary Science, Veterinary
Preclinical Centre, The University of Melbourne,
Parkville, Australia

SOURCE: Journal of Bacteriology (2004), 186(17), 5790-5798

Searcher : Shears 571-272-2528

CODEN: JOBAAY; ISSN: 0021-9193
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Mycoplasma hyopneumoniae** is the most significant bacterial pathogen of the respiratory tract of swine. P65 is an immunodominant surface lipoprotein of **M. hyopneumoniae** that is specifically recognized during disease. Anal. of the translated amino acid sequence of the gene encoding p65 revealed similarity to the GDSL family of lipolytic enzymes. To examine the lipolytic activity of p65, the gene was cloned and expressed in *Escherichia coli* after truncation of the prokaryotic lipoprotein signal sequence and **mutagenesis** of the mycoplasma TGA tryptophan codons. After treatment with thrombin, the recombinant glutathione S-transferase (GST)-p65 protein yielded a 66-kDa fusion protein cleavage product corresponding in size to the mature p65 protein. The esterase activity of recombinant GST-p65 was indicated by the formation of a cleared zone on tributyrin agar plates and the hydrolysis of p-nitrophenyl esters of caproate (pNPC) and p-nitrophenyl esters of palmitate (pNPP). Lipase activity was indicated by the hydrolysis of the artificial triglyceride 1,2-O-dilauryl-rac-glycero-3-glutaric acid resorufin ester. Using pNPC and pNPP as substrates, recombinant GST-p65 had optimal activity between pHs 9.2 and 10.2 and at a temperature higher than 39°C. Calcium ions did not increase the activity of recombinant GST-p65. Rabbit anti-p65 antibodies inhibited the activity of recombinant GST-p65 and also inhibited the growth of **M. hyopneumoniae** in vitro. Examination of the kinetic parameters of recombinant GST-p65 for the hydrolysis of pNPC and pNPP indicated a preference for the shorter fatty acid chain of pNPC. The physiol. and/or pathogenic role of mycoplasma lipolytic enzymes has not been determined, but they are likely to play an important role in mycoplasmas' nutritional requirements for long-chain fatty acids and may reduce the function of lung surfactants in mycoplasma-induced respiratory diseases. This is the first report of the lipolytic activity of a lipid-modified surface **immunogen** of a mycoplasma.

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 2 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 18 Mar 2004

ACCESSION NUMBER: 2004:215947 HCAPLUS

DOCUMENT NUMBER: 140:422161

TITLE: *Erysipelothrix rhusiopathiae* YS-1: a live vaccine **vector** for mucosal delivery of recombinant proteins in **pigs**

AUTHOR(S): Shimoji, Yoshihiro

CORPORATE SOURCE: National Institute of Animal Health, Tsukuba, 305-0856, Japan

SOURCE: Recent Research Developments in Microbiology (2002), 6(Pt. 2), 387-393
CODEN: RDMIFR

PUBLISHER: Research Signpost

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. *Erysipelothrix rhusiopathiae* YS-1 is a stable, acapsular **mutant** that was rationally developed by a novel mechanism using the self-conjugative transposon Tn916. With a new expression

system for surface display of heterologous proteins on E. rhusiopathiae, the C-terminal portion of the P97 adhesin of **Mycoplasma hyopneumoniae**, the causative agent of enzootic pneumonia in **pigs**, was successfully expressed on the YS-1 strain. Intranasal vaccination of **piglets** with the recombinant YS-1 strain induced complete protection against E. rhusiopathiae infection and greatly reduced the severity of lung lesions after challenge of a virulent **M. hyopneumoniae**.

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 11 Jan 2004

ACCESSION NUMBER: 2004:20823 HCAPLUS

DOCUMENT NUMBER: 140:110097

TITLE: **Immunogenic** polypeptides of **Mycoplasma hyopneumoniae** and encoding nucleic acids for diagnosis and therapy

INVENTOR(S): Minion, Chris F.; Mahairas, Gregory G.; Djordjevic, Steven P.

PATENT ASSIGNEE(S): Iowa State University Research Foundation, Inc., USA; NSW Agriculture; Department of Agriculture For and On Behalf of The State of New South Wales

SOURCE: PCT Int. Appl., 81 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004003161	A2	20040108	WO 2003-US20460	20030627
WO 2004003161	A3	20050428		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2004091901	A1	20040513	US 2003-607631	20030627
EP 1546357	A2	20050629	EP 2003-742308	20030627
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
PRIORITY APPLN. INFO.:			US 2002-392632P	P 20020628
			WO 2003-US20460	W 20030627

AB **Mycoplasma hyopneumoniae** polypeptides and nucleic acids, as well as nucleic acid expression **vectors** and host cells containing nucleic acid **vectors** are provided. In addition, compns. containing **M. hyopneumoniae** polypeptides and

nucleic acids are provided for use in methods of treating swine to prevent enzootic pneumonia. Furthermore, the invention provides diagnostic tests for the detecting of *M. hyopneumoniae* infection in swine herds.

L23 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 06 Jan 2004

ACCESSION NUMBER: 2004:7758 HCAPLUS

DOCUMENT NUMBER: 140:282587

TITLE: Effects of Gestational and Lactational Exposure to Organochlorine Compounds on Cellular, Humoral, and Innate Immunity in Swine

AUTHOR(S): Bilrha, Houda; Roy, Raynald; Wagner, Eric; Belles-Isles, Marthe; Bailey, Janice L.; Ayotte, Pierre

CORPORATE SOURCE: Unite de Recherche en Rhumatologie et Immunologie, Centre de Recherche du CHUL-CHUQ, Quebec, QC, G1V 4G2, Can.

SOURCE: Toxicological Sciences (2004), 77(1), 41-50

CODEN: TOSCF2; ISSN: 1096-6080

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Few studies have characterized the immunotoxic potential of complex mixts. of organochlorines (OCs) that bear environmental relevance. We monitored immune parameters in male piglets exposed in utero and through lactation to an OC mixture which was designed to approx. that found in the traditional diet of Arctic aboriginal populations. Prepubertal sows were **administered** orally either corn oil (control group) or the OC mixture in increasing doses (low, medium, and high). The sows were inseminated with the semen from an untreated boar and OC treatment was continued throughout gestation and lactation (21 days). Blood was collected from the sows at delivery and monthly from piglets until 8 mo of age for the determination of plasma OC concns.

and

parameters of innate, cellular, and humoral immunity. Treatment with the OC mixture had no dose-dependent effect on the proportion of CD4+ and CD8+ T-cell subsets, and did not modulate the functional activity of the complement component C2. The proportion of CD4+CD8+ cells, CD8+DR+ cells, and the mitogenic lymphoproliferative response increased in OC-treated, 4-mo-old piglets. At 6 mo, the lymphoproliferative response to mitogen and the proportion CD4+CD8+ cells were still elevated in the OC-treated piglets, but the proportion of CD8+DR+ cells was decreased as compared to the controls. Animals in the high-dose group also exhibited a slight increase in **polymorphonuclear** leukocyte phagocytic activity at 8 mo of age. Furthermore, the high dose decreased the antibody response to **Mycoplasma hyopneumoniae**. Our results indicate that developmental exposure to an environmentally relevant OC mixture alters the immune function in swine.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 16 Jun 2003

ACCESSION NUMBER: 2003:457886 HCAPLUS

DOCUMENT NUMBER: 139:99617

TITLE: Monoclonal antibodies to Escherichia

coli-expressed P46 and P65 membranous proteins for specific immunodetection of **Mycoplasma hyopneumoniae** in lungs of infected **pigs**

AUTHOR(S): Bouh, K. Cheikh Saad; Shareck, F.; Dea, S.
 CORPORATE SOURCE: INRS-Institut Armand-Frappier, Universite du Quebec, Laval, QC, H7V 1B, Can.
 SOURCE: Clinical and Diagnostic Laboratory Immunology (2003), 10(3), 459-468
 CODEN: CDIMEN; ISSN: 1071-412X
 PUBLISHER: American Society for Microbiology
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The P46 and P65 proteins of **Mycoplasma hyopneumoniae** are two membranous proteins carrying species-specific antigenic determinants. Based on the genomic sequence of the reference strain ATCC 25934, primers were designed for PCR amplification of the genes encoding entire P46 (1,260 bp) and P65 (1,803 bp) and N-terminally truncated P65c (1,200 bp). These primers were shown to be specific to **M. hyopneumoniae** since no DNA amplicons could be obtained with other mycoplasma species that commonly colonize the **porcine** respiratory tract. Both amplified genes were then cloned into the pGEX-4T-1 **vector** to be expressed in *Escherichia coli* cells as recombinant fusion proteins with glutathione S-transferase (GST). Prior to generation of expression constructs, TGA nonsense codons, exceptionally used for tryptophan residues by **M. hyopneumoniae**, had been converted to TGG codons by PCR-directed **mutagenesis**. Following induction by IPTG (isopropyl- β -D-thiogalactopyranoside), both GST-P46 and GST-P65c recombinant fusion proteins were recovered by disrupting transformed cells by sonication, purified by affinity chromatog., and then cut with thrombin to release the P46 and P65c moieties. The enriched *E. coli*-expressed P46 and P65c proteins were used to immunize female BALB/c mice for the generation of anti-P46 and anti-P65c monoclonal antibodies (MAbs). The polypeptide specificities of MAbs obtained was confirmed by Western blotting with cell lysates prepared from the homologous strain. Cross-reactivity study of the anti-P46 and anti-P65c MAbs towards two other **M. hyopneumoniae** reference strains (ATCC 25095 and J strains) and Quebec field strains that had been isolated in culture, suggested that the MAbs obtained against both membranous proteins were directed against highly conserved species-specific epitopes. No reactivity to other mycoplasma species tested was demonstrated. Clin. signs and lesions suggestive of enzootic pneumonia were reproduced in specific-pathogen-free **pigs** that had been inoculated intratracheally with a virulent Quebec field strain (IAF-DM9827) of **M. hyopneumoniae**. Both anti-P46 and anti-P65c MAbs permitted effective detection by indirect immunofluorescence and indirect immunoperoxidase assay of **M. hyopneumoniae** in, resp., frozen and formalin-fixed, paraffin-embedded lung sections from **pigs** that were killed after the 6- to 7-wk observation period.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
 ED Entered STN: 26 Mar 2003
 ACCESSION NUMBER: 2003:235421 HCAPLUS
 DOCUMENT NUMBER: 138:253707

10/607631

TITLE: Fusion agents containing immunostimulating (adjuvant) and **immunogenic** domain as vaccines
 INVENTOR(S): Minion, F. Chris; Menon, Sreekumar A.; Mahairas, Gregory G.
 PATENT ASSIGNEE(S): Iowa State University Research Foundation, Inc., USA
 SOURCE: U.S., 26 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6537552	B1	20030325	US 2000-692064	20001019
US 2003162260	A1	20030828	US 2003-384948	20030310
PRIORITY APPLN. INFO.:			US 1999-160429P	P 19991019
			US 1999-160249P	P 19991019
			US 2000-692064	A3 20001019

AB I fusion agents such as fusion proteins that are useful for the treatment and prevention of diseases that are susceptible to the effects of cellular (Th1 type) immune responses. Also encompassed by the invention are nucleic acids encoding the fusion proteins of the invention, vectors containing the nucleic acids, and cells containing the vectors. The invention includes methods of making and using the fusion agents of the invention.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 04 Oct 2002

ACCESSION NUMBER: 2002:752377 HCAPLUS

DOCUMENT NUMBER: 137:277776

TITLE: Sequences of **Mycoplasma hyopneumoniae** antigen mhp3 and therapeutic and diagnosis uses

INVENTOR(S): King, Kendall Wayne; Madura, Rebecca Anne; Rosey, Everett Lee

PATENT ASSIGNEE(S): Pfizer Products Inc., USA

SOURCE: Eur. Pat. Appl., 38 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1245677	A1	20021002	EP 2001-303030	20010330
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001002541	A	20020528	BR 2001-2541	20010329
JP 2002306169	A2	20021022	JP 2001-101364	20010330
PRIORITY APPLN. INFO.:			US 2000-676249	A 20000929

Searcher : Shears 571-272-2528

EP 2001-303030

A 20010330

AB The present invention provides protein and DNA sequences of **Mycoplasma hyopneumoniae** antigen mhp3 gene. The present invention further relates to novel apoprotein antigens encoded by mhp3 gene for use in vaccines to prevent and treat diseases caused by infection with **Mycoplasma hyopneumoniae**. The invention further relates to methods, **vector** and host cells for recombinant production of such antigens. The invention also relates to diagnosis of infections in **pig** caused by **Mycoplasma hyopneumoniae**.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 10 Feb 2002

ACCESSION NUMBER: 2002:107503 HCAPLUS

DOCUMENT NUMBER: 136:156391

TITLE: Temperature-sensitive live vaccine for

Mycoplasma hyopneumoniae

INVENTOR(S): Pijoan, Carlos

PATENT ASSIGNEE(S): Regents of the University of Minnesota, USA

SOURCE: PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002010343	A2	20020207	WO 2001-US23663	20010727
WO 2002010343	A3	20021010		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 6585981	B1	20030701	US 2000-627006	20000727
CA 2417482	AA	20020207	CA 2001-2417482	20010727
AU 2001077207	A5	20020213	AU 2001-77207	20010727
EP 1307540	A2	20030507	EP 2001-954997	20010727
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
BR 2001012792	A	20030624	BR 2001-12792	20010727
JP 2004505096	T2	20040219	JP 2002-516062	20010727
NZ 524035	A	20040924	NZ 2001-524035	20010727
NO 2003000423	A	20030312	NO 2003-423	20030127
PRIORITY APPLN. INFO.:			US 2000-627006	A1 20000727
			WO 2001-US23663	W 20010727

AB Preparation of a live temperature-sensitive vaccine against *M. hyopneumoniae* infections for a swine is described. The vaccine comprises a **mutant** of *M. hyopneumoniae* obtained by treatment with N-methyl-N-nitro-N-nitrosoguanidine in combination with a physiol. acceptable, non-toxic carrier. It is **administered** by s.c. or i.m. injection, oral ingestion, or intranasally. The vaccine further comprises an immunol. adjuvant and at least one addnl. infectious agent, i.e., a virus, a bacterium, a fungus or a parasite. The safety and efficacy of the vaccine against *M. hyopneumoniae* were confirmed in pigs. The vaccine is useful for protection against porcine respiratory disease complex.

L23 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 09 Nov 2001

ACCESSION NUMBER: 2001:816894 HCAPLUS

DOCUMENT NUMBER: 135:353765

TITLE: Recombinant **porcine** adenovirus serotype 5 (PAdV-5) and method of preparing vaccines against intestinal or respiratory infection in **pigs**

INVENTOR(S): Nagy, Eva; Tuboly, Tamas; Nagy, Miklos

PATENT ASSIGNEE(S): University of Guelph, Can.

SOURCE: PCT Int. Appl., 88 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001083737	A2	20011108	WO 2001-CA598	20010503
WO 2001083737	A3	20020822		
W: CA, MX, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
CA 2413265	AA	20011108	CA 2001-2413265	20010503
EP 1311698	A2	20030521	EP 2001-929140	20010503
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
PRIORITY APPLN. INFO.:			US 2000-201666P	P 20000503
			WO 2001-CA598	W 20010503

AB The entire nucleotide sequence of **porcine** adenovirus serotype 5 (PAdV-5) is described, as well as PAdV-5 use as delivery **vector** or vaccine. The present invention includes modified forms of PAdV-5, including PAdV-5 wherein the E3 region has been deleted. Methods of inserting heterologous nucleotide sequences, such as the S gene of transmissible gastroenteritis virus (TGEV), into the E3 region of the virus are also described. Vaccines and methods of preparing vaccines with the recombinant PAdV-5 are described as well as applications of the recombinant virus and vaccines to prevent or treat intestinal or respiratory infection in **pigs**.

L23 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 13 Apr 2001

10/607631

ACCESSION NUMBER: 2001:261139 HCAPLUS
 DOCUMENT NUMBER: 134:294510
 TITLE: Sequences of **Mycoplasma hyopneumoniae** antigen mhp3 and therapeutic uses thereof
 INVENTOR(S): King, Kendall Wayne; Madura, Rebecca Anne; Rosey, Everett Lee
 PATENT ASSIGNEE(S): Pfizer Products Inc., USA
 SOURCE: Eur. Pat. Appl., 38 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1090995	A2	20010411	EP 2000-308421	20000926
EP 1090995	A3	20010418		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CA 2319213	AA	20010329	CA 2000-2319213	20000927
BR 2000004488	A	20011113	BR 2000-4488	20000927
NZ 507205	A	20020301	NZ 2000-507205	20000928
CN 1296953	A	20010530	CN 2000-129083	20000929
JP 2001149085	A2	20010605	JP 2000-300778	20000929
CA 2340455	AA	20020928	CA 2001-2340455	20010328
ZA 200102540	A	20030410	ZA 2001-2540	20020328
PRIORITY APPLN. INFO.:			US 1999-156602P	P 19990929

AB The present invention provides protein and DNA sequences of **Mycoplasma hyopneumoniae** antigen mhp3 gene. The present invention further relates to novel apoprotein antigens encoded by mhp3 gene for use in vaccines to prevent and treat diseases caused by infection with **Mycoplasma hyopneumoniae**. The invention further relates to method recombinant production of such antigens.

L23 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 02 Feb 1999

ACCESSION NUMBER: 1999:70376 HCAPLUS
 DOCUMENT NUMBER: 130:144164
 TITLE: Detoxified **immunogenic** β -toxin derivative as a *Clostridium perfringens* vaccine
 INVENTOR(S): Sergers, Ruud Philip Antoon Maria; Waterfield, Nicolas Robin; Frandsen, Peer Lyng; Wells, Jeremy Mark
 PATENT ASSIGNEE(S): Akzo Nobel N.V., Neth.
 SOURCE: Eur. Pat. Appl., 70 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 892054	A1	19990120	EP 1998-202032	19980617
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,				

Searcher : Shears 571-272-2528

PT, IE, SI, LT, LV, FI, RO

CA 2235445	AA	19981220	CA 1998-2235445	19980618
AU 9873087	A1	19981224	AU 1998-73087	19980619
AU 743498	B2	20020124		
ZA 9805393	A	19990217	ZA 1998-5393	19980619
JP 11103872	A2	19990420	JP 1998-210185	19980619
CN 1215729	A	19990505	CN 1998-103183	19980619
US 6610300	B1	20030826	US 1998-100703	19980619
BR 9802361	A	20000111	BR 1998-2361	19980622
TW 221847	B1	20041011	TW 1998-87119292	19981120
AU 764620	B2	20030828	AU 2002-18818	20020228
AU 2002018818	A5	20020418		
PRIORITY APPLN. INFO.:			EP 1997-201888	A 19970620
			AU 1998-73087	A3 19980619

AB The present invention relates to detoxified **immunogenic** derivs. of Clostridium perfringens β -toxin or an **immunogenic** fragment thereof that have as a characteristic that they carry a **mutation** in the β -toxin amino acid sequence, not found in the wild-type β -toxin amino acid sequence. Those regions of the β -toxin that are particularly suitable are those that form a transition domain between neutral and hydrophilic parts of the protein; thus, suitable target regions for **mutations** are located at position 62, 182, 197, between 80-103, 145-147, 281-291 relative to the peptide leader methionine, and the region downstream of the unique cysteine-292. The invention also relates to genes encoding such β -toxins, as well as to expression systems expressing such β -toxins. Expression plasmids were constructed suitable for Lactococcus lactis. Moreover, the invention relates to bacterial expression systems expressing a native β -toxin. Finally, the invention relates to vaccines based upon detoxified **immunogenic** derivs. of Clostridium perfringens β -toxin, and methods for the preparation of such vaccines. **Pigs** responded to vaccination with the genetically modified β -toxin by producing β -toxin-inhibiting anti- β -antibodies.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 01 Oct 1997

ACCESSION NUMBER: 1997:625617 HCAPLUS

DOCUMENT NUMBER: 127:289141

TITLE: **Vectors** based on recombinant defective viral genomes, and their use in the formulation of vaccines

INVENTOR(S): Enjuanes Sanchez, Luis; Plana Duran, Juan; Alonso Villanueva, Sara; Ballesteros Jarreno, Ma. Luisa; Castilla Castrillon, Joaquin; Gonzalez Martinez, Jose Manuel; Izeta Parmesan, Ander; Mendez Zunzunegui, Ana; et al.

PATENT ASSIGNEE(S): Cyanamid Iberica, S.A., Spain

SOURCE: PCT Int. Appl., 102 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Spanish

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9734008	A1	19970918	WO 1997-ES59	19970312
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
ES 2109189	A1	19980101	ES 1996-620	19960314
ES 2109189	B1	19980516		
CA 2248978	AA	19970918	CA 1997-2248978	19970312
AU 9719277	A1	19971001	AU 1997-19277	19970312
AU 729044	B2	20010125		
CN 1218513	A	19990602	CN 1997-194614	19970312
BR 9708061	A	20000104	BR 1997-8061	19970312
EP 1008652	A1	20000614	EP 1997-907111	19970312
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI, RO				
JP 2000513565	T2	20001017	JP 1997-532304	19970312
RU 2199584	C2	20030227	RU 1998-118555	19970312
PL 188546	B1	20050228	PL 1997-328791	19970312
US 2004052775	A1	20040318	US 2003-444059	20030523
PRIORITY APPLN. INFO.:			ES 1996-620	A 19960314
			WO 1997-ES59	W 19970312
			US 1998-155003	A3 19980914

AB The **vectors** comprise a recombinant defective viral genome which expresses at least one antigen appropriate for inducing secretory and systemic immune responses or an antibody which provides protection against an infectious agent. The viral defective genome comprises the genome of a parental virus which has viral replicase recognition sites which are located at the 3' and 5' extremities, and comprises addnl. internal deletions, and wherein said defective viral genome depends on a complementing virus for its replication and encapsidation. Said **vectors** are appropriate to form a recombinant system which comprises said expression **vector** and a complementing virus. The system is appropriate for the preparation of mono- and polyvalent vaccines against infectious agents of various animal species, specially **pigs**, dogs and cats, and as vehicles for the expression of antibodies against infectious agents.

L23 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ED Entered STN: 09 May 1995

ACCESSION NUMBER: 1995:534790 HCAPLUS

DOCUMENT NUMBER: 122:310144

TITLE: Recombinant 46-kilodalton surface antigen (P46) of **Mycoplasma hyopneumoniae**

expressed in Escherichia coli can be used for early specific diagnosis of mycoplasmal pneumonia of swine by enzyme-linked immunosorbent assay

AUTHOR(S): Futo, Satoshi; Seto, Yasuhiro; Okada, Munenori; Sato, Shizuo; Suzuki, Tohru; Kawai, Keiichi;

10/607631

CORPORATE SOURCE: Imada, Yumiko; Mori, Yasuyuki
Faculty Agriculture, Gifu University, Gifu,
501-11, Japan
SOURCE: Journal of Clinical Microbiology (1995), 33(3),
680-3
CODEN: JCMIDW; ISSN: 0095-1137
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The 46-kDa surface antigen (P46) is the early and species-specific immunogenic protein of *Mycoplasma hyopneumoniae*. Three TGA codons encoding tryptophan in the P46 gene were replaced with TGG by an in vitro mutagenesis technique. The mutated P46 gene was expressed in *Escherichia coli* by using the chelating peptide tag system. The purified recombinant P46 was successfully used in an ELISA for detection of antibodies against *M. hyopneumoniae* in swine serum. It did not cross-react with sera from swine infected with *Mycoplasma flocculate*, *Mycoplasma hyorhinis*, or *Mycoplasma hyosynoviae*. With this method, mycoplasmal pneumonia of swine was detectable within 2 wk after infection.

FILE 'MEDLINE' ENTERED AT 12:22:22 ON 22 NOV 2005

FILE 'BIOSIS' ENTERED AT 12:22:22 ON 22 NOV 2005
Copyright (c) 2005 The Thomson Corporation

FILE 'EMBASE' ENTERED AT 12:22:22 ON 22 NOV 2005
Copyright (c) 2005 Elsevier B.V. All rights reserved.

FILE 'WPIDS' ENTERED AT 12:22:22 ON 22 NOV 2005
COPYRIGHT (C) 2005 THE THOMSON CORPORATION

FILE 'CONFSCI' ENTERED AT 12:22:22 ON 22 NOV 2005
COPYRIGHT (C) 2005 Cambridge Scientific Abstracts (CSA)

FILE 'SCISEARCH' ENTERED AT 12:22:22 ON 22 NOV 2005
Copyright (c) 2005 The Thomson Corporation

FILE 'JICST-EPLUS' ENTERED AT 12:22:22 ON 22 NOV 2005
COPYRIGHT (C) 2005 Japan Science and Technology Agency (JST)

FILE 'JAPIO' ENTERED AT 12:22:22 ON 22 NOV 2005
COPYRIGHT (C) 2005 Japanese Patent Office (JPO)- JAPIO

FILE 'CABA' ENTERED AT 12:22:22 ON 22 NOV 2005
COPYRIGHT (C) 2005 CAB INTERNATIONAL (CABI)

FILE 'AGRICOLA' ENTERED AT 12:22:22 ON 22 NOV 2005

FILE 'VETU' ENTERED AT 12:22:22 ON 22 NOV 2005
COPYRIGHT (C) 2005 THE THOMSON CORPORATION

FILE 'VETB' ENTERED AT 12:22:22 ON 22 NOV 2005
COPYRIGHT (C) 2005 THE THOMSON CORPORATION

L24 120 S L18
L25 17 S L24 AND IMMUNOGEN?
L26 84 S L24 AND (PORCINE OR PIG OR PIGLET OR SWINE OR HOG)
L27 10 S L26 AND VECTOR

Searcher : Shears 571-272-2528

10/607631

L28 7 S L24 AND ADMIN?
L29 28 S L25 OR L27 OR L28
L30 12 DUP REM L29 (16 DUPLICATES REMOVED)

L30 ANSWER 1 OF 12 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-420044 [39] WPIDS
DOC. NO. NON-CPI: N2004-333457
DOC. NO. CPI: C2004-157681
TITLE: Identifying an animal which has been vaccinated with
an **immunogen**, comprises detecting the
presence of antibodies or immune cells specific to
recombinant substantially non-toxic E. coli
heat-labile enterotoxin **mutant** in the
animal.
DERWENT CLASS: B04 D16 P32
INVENTOR(S): MCVEY, D S
PATENT ASSIGNEE(S): (MCVE-I) MCVEY D S; (PFIZ) PFIZER PROD INC
COUNTRY COUNT: 108
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2004043286	A2	20040527	(200439)*	EN	37
RW:	AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT				
	KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW				
W:	AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ				
	DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP				
	KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI				
	NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT				
	TZ UA UG US UZ VC VN YU ZA ZM ZW				
US 2004170637	A1	20040902	(200458)		
AU 2003278496	A1	20040603	(200470)		
EP 1581256	A2	20051005	(200565)	EN	
R:	AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU				
	LV MC MK NL PT RO SE SI SK TR				

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004043286	A2	WO 2003-IB5103	20031110
US 2004170637	A1 Provisional	US 2002-426421P	20021114
		US 2003-714679	20031114
AU 2003278496	A1	AU 2003-278496	20031110
EP 1581256	A2	EP 2003-769796	20031110
		WO 2003-IB5103	20031110

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003278496	A1 Based on	WO 2004043286
EP 1581256	A2 Based on	WO 2004043286

PRIORITY APPLN. INFO: US 2002-426421P 20021114; US
2003-714679 20031114

AN 2004-420044 [39] WPIDS

AB WO2004043286 A UPAB: 20040621

NOVELTY - Identifying an animal which has been vaccinated with an

Searcher : Shears 571-272-2528

immunogen comprises detecting the presence of antibodies or immune cells that are specific to recombinant substantially non-toxic E. coli heat-labile enterotoxin **mutant** (rmLT) in the animal.

DETAILED DESCRIPTION - Identifying an animal which has been vaccinated with an **immunogen** comprises:

(a) providing a vaccine composition comprising the **immunogen** and a recombinant substantially non-toxic E. coli heat-labile enterotoxin **mutant** (rmLT);

(b) **administering** the vaccine composition to the animal;

(c) detecting the presence of antibodies or immune cells that are specific to rmLT in the animal to identify the animal as having been vaccinated with the vaccine preparation.

INDEPENDENT CLAIMS are also included for:

(1) determining that an animal that has been vaccinated with a vaccine composition, which includes an **immunogen** and a substantially nontoxic rmLT, comprising detecting the presence of antibodies or immune cells that are specific to rmLT;

(2) marking or identifying a vaccine composition containing an **immunogen** by:

(a) adding a substantially nontoxic rmLT in the vaccine composition;

(b) **administering** the vaccine composition to an animal; and

(c) detecting presence of antibodies or immune cells that are specific to rmLT in the animal to identify the vaccine composition;

(3) enhancing the immunoprotective effects of an **immunogen** in a vaccine composition for **administration** to an animal, by adding to the vaccine composition a substantially nontoxic rmLT; and

(4) a vaccine composition for **administration** to an animal comprising an **immunogen**, a substantially non-toxic rmLT and an oil-in-water emulsion adjuvant.

ACTIVITY - Immunostimulant. No biological data given.

MECHANISM OF ACTION - Vaccine.

USE - The method is useful for identifying an animal which has been vaccinated with rmLT (claimed). The rmLT is useful as an adjuvant to enhance the immunoprotective effects of an **immunogen** in a vaccine composition, or as a marker antigen.

Dwg.0/6

L30 ANSWER 2 OF 12 WPIDS COPYRIGHT 2005 THE THOMSON CORP on STN
 ACCESSION NUMBER: 2004-083044 [08] WPIDS
 DOC. NO. CPI: C2004-034160
 TITLE: New **immunogenic Mycoplasma hyopneumoniae** polypeptide, useful in eliciting an immune response and in treating or preventing enzootic pneumonia.
 DERWENT CLASS: B04 C06 D16
 INVENTOR(S): DJORDJEVIC, S P; MINION, F C; MAHAIRAS, G G; MINION, C F
 PATENT ASSIGNEE(S): (IOWA) UNIV IOWA STATE RES FOUND INC; (NEWS-N) NEW SOUTH WALES DEPT AGRIC; (DJOR-I) DJORDJEVIC S P; (MINI-I) MINION F C; (NSWA-N) NSW AGRIC
 COUNTRY COUNT: 103
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

10/607631

WO 2004003161 A2 20040108 (200408)* EN 81
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE
LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE
DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG
KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM
PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ
VC VN YU ZA ZM ZW
US 2004091901 A1 20040513 (200432)
AU 2003280431 A1 20040119 (200447)
EP 1546357 A2 20050629 (200543) EN
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU
LV MC MK NL PT RO SE SI SK TR
AU 2003280431 A8 20040119 (200562)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2004003161	A2	WO 2003-US20460	20030627
US 2004091901	A1 Provisional	US 2002-392632P	20020628
		US 2003-607631	20030627
AU 2003280431	A1	AU 2003-280431	20030627
EP 1546357	A2	EP 2003-742308	20030627
		WO 2003-US20460	20030627
AU 2003280431	A8	AU 2003-280431	20030627

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003280431	A1 Based on	WO 2004003161
EP 1546357	A2 Based on	WO 2004003161
AU 2003280431	A8 Based on	WO 2004003161

PRIORITY APPLN. INFO: US 2002-392632P 20020628; US
2003-607631 20030627

AN 2004-083044 [08] WPIDS

AB WO2004003161 A UPAB: 20040202

NOVELTY - A purified **immunogenic** polypeptide (I) comprising at least 8 consecutive residues of a sequence of 1010, 1032, 1194, 1539, 1121, 957, 945, 460, 451 or 1878 amino acids (EVEN SEQ ID NOS: 2-20), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

- (1) an isolated nucleic acid or its **mutant** comprising a nucleotide sequence encoding (I);
- (2) a **vector** comprising the nucleic acid of (1);
- (3) a host cell comprising the **vector** of (2);
- (4) a composition comprising (I) or the **vector** of (2) and a pharmaceutical carrier;
- (5) eliciting an immune response in an animal;
- (6) determining whether or nor an animal has an antibody reactive to (I); and
- (7) a diagnostic kit for detecting the presence of an antibody in a test sample, where the antibody is reactive to (I), comprising (I).

ACTIVITY - Immunostimulant; Antiinflammatory. No biological data given.

MECHANISM OF ACTION - Vaccine.

USE - The **immunogenic** polypeptides and nucleic acids

Searcher : Shears 571-272-2528

are useful in eliciting an immune response and in treating or preventing enzootic pneumonia.
Dwg.0/22

L30 ANSWER 3 OF 12 MEDLINE on STN DUPLICATE 1
 ACCESSION NUMBER: 2004413275 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 15317784
 TITLE: **Mycoplasma hyopneumoniae** p65
 surface lipoprotein is a lipolytic enzyme with a preference for shorter-chain fatty acids.
 AUTHOR: Schmidt Jono A; Browning Glenn F; Markham Philip F
 CORPORATE SOURCE: Department of Veterinary Science, Veterinary Preclinical Centre, The University of Melbourne, Parkville, Victoria 3010, Australia.
 SOURCE: Journal of bacteriology, (2004 Sep) 186 (17) 5790-8.
 Journal code: 2985120R. ISSN: 0021-9193.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 OTHER SOURCE: GENBANK-AAB67173; GENBANK-AAB70214
 ENTRY MONTH: 200409
 ENTRY DATE: Entered STN: 20040820
 Last Updated on STN: 20040922
 Entered Medline: 20040921

AB **Mycoplasma hyopneumoniae** is the most significant bacterial pathogen of the respiratory tract of swine. p65 is an immunodominant surface lipoprotein of **M. hyopneumoniae** that is specifically recognized during disease. Analysis of the translated amino acid sequence of the gene encoding p65 revealed similarity to the GDSL family of lipolytic enzymes. To examine the lipolytic activity of p65, the gene was cloned and expressed in *Escherichia coli* after truncation of the prokaryotic lipoprotein signal sequence and **mutagenesis** of the mycoplasma TGA tryptophan codons. After treatment with thrombin, the recombinant glutathione S-transferase (GST)-p65 protein yielded a 66-kDa fusion protein cleavage product corresponding in size to the mature p65 protein. The esterase activity of recombinant GST-p65 was indicated by the formation of a cleared zone on tributyrin agar plates and the hydrolysis of p-nitrophenyl esters of caproate (pNPC) and p-nitrophenyl esters of palmitate (pNPP). Lipase activity was indicated by the hydrolysis of the artificial triglyceride 1,2-O-dilauryl-rac-glycero-3-glutaric acid resorufin ester. Using pNPC and pNPP as substrates, recombinant GST-p65 had optimal activity between pHs 9.2 and 10.2 and at a temperature higher than 39 degrees C. Calcium ions did not increase the activity of recombinant GST-p65. Rabbit anti-p65 antibodies inhibited the activity of recombinant GST-p65 and also inhibited the growth of **M. hyopneumoniae** in vitro. Examination of the kinetic parameters of recombinant GST-p65 for the hydrolysis of pNPC and pNPP indicated a preference for the shorter fatty acid chain of pNPC. The physiological and/or pathogenic role of mycoplasma lipolytic enzymes has not been determined, but they are likely to play an important role in mycoplasmas' nutritional requirements for long-chain fatty acids and may reduce the function of lung surfactants in mycoplasma-induced respiratory diseases. This is the first report of the lipolytic activity of a lipid-modified surface **immunogen** of a mycoplasma.

L30 ANSWER 4 OF 12 MEDLINE on STN DUPLICATE 2
 ACCESSION NUMBER: 2004008055 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 14704374
 TITLE: Effects of gestational and lactational exposure to organochlorine compounds on cellular, humoral, and innate immunity in swine.
 AUTHOR: Bilrha Houda; Roy Raynald; Wagner Eric; Belles-Isles Marthe; Bailey Janice L; Ayotte Pierre
 CORPORATE SOURCE: Unite de recherche en Rhumatologie et Immunologie, Centre de Recherche du CHUL-CHUQ, Quebec, QC, Canada G1V 4G2.
 SOURCE: Toxicological sciences : an official journal of the Society of Toxicology, (2004 Jan) 77 (1) 41-50. Journal code: 9805461. ISSN: 1096-6080.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200408
 ENTRY DATE: Entered STN: 20040106
 Last Updated on STN: 20040901
 Entered Medline: 20040831

AB Few studies have characterized the immunotoxic potential of complex mixtures of organochlorines (OCs) that bear environmental relevance. We monitored immune parameters in male piglets exposed in utero and through lactation to an OC mixture which was designed to approximate that found in the traditional diet of Arctic aboriginal populations. Prepubertal sows were **administered** orally either corn oil (control group) or the OC mixture in increasing doses (low, medium, and high). The sows were inseminated with the semen from an untreated boar and OC treatment was continued throughout gestation and lactation (21 days). Blood was collected from the sows at delivery and monthly from piglets until 8 months of age for the determination of plasma OC concentrations and parameters of innate, cellular, and humoral immunity. Treatment with the OC mixture had no dose-dependent effect on the proportion of CD4+ and CD8+ T-cell subsets, and did not modulate the functional activity of the complement component C2. The proportion of CD4+CD8+ cells, CD8+DR+ cells, and the mitogenic lymphoproliferative response increased in OC-treated, 4-month-old piglets. At 6 months, the lymphoproliferative response to mitogen and the proportion CD4+CD8+ cells were still elevated in the OC-treated piglets, but the proportion of CD8+DR+ cells was decreased as compared to the controls. Animals in the high-dose group also exhibited a slight increase in **polymorphonuclear** leukocyte phagocytic activity at 8 months of age. Furthermore, the high dose decreased the antibody response to **Mycoplasma hyopneumoniae**. Our results indicate that developmental exposure to an environmentally relevant OC mixture alters the immune function in swine.

L30 ANSWER 5 OF 12 MEDLINE on STN DUPLICATE 3
 ACCESSION NUMBER: 2003217192 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 12738649
 TITLE: Monoclonal antibodies to Escherichia coli-expressed P46 and P65 membranous proteins for specific immunodetection of **Mycoplasma hyopneumoniae** in lungs of infected **pigs**
 AUTHOR: Cheikh Saad Bouh K; Shareck F; Dea S
 CORPORATE SOURCE: INRS-Institut Armand-Frappier, Universite du Quebec,

SOURCE: Laval, Quebec, Canada, H7V 1B.
Clinical and diagnostic laboratory immunology, (2003
May) 10 (3) 459-68.
Journal code: 9421292. ISSN: 1071-412X.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200403

ENTRY DATE: Entered STN: 20030513
Last Updated on STN: 20040317
Entered Medline: 20040316

AB The P46 and P65 proteins of *Mycoplasma hyopneumoniae* are two membranous proteins carrying species-specific antigenic determinants. Based on the genomic sequence of the reference strain ATCC 25934, primers were designed for PCR amplification of the genes encoding entire P46 (1,260 bp) and P65 (1,803 bp) and N-terminally truncated P65(c) (1,200 bp). These primers were shown to be specific to *M. hyopneumoniae* since no DNA amplicons could be obtained with other mycoplasma species that commonly colonize the porcine respiratory tract. Both amplified genes were then cloned into the pGEX-4T-1 vector to be expressed in *Escherichia coli* cells as recombinant fusion proteins with glutathione S-transferase (GST). Prior to generation of expression constructs, TGA nonsense codons, exceptionally used for tryptophan residues by *M. hyopneumoniae*, had been converted to TGG codons by PCR-directed mutagenesis. Following induction by IPTG (isopropyl-beta-D-thiogalactopyranoside), both GST-P46 and GST-P65(c) recombinant fusion proteins were recovered by disrupting transformed cells by sonication, purified by affinity chromatography, and then cut with thrombin to release the P46 and P65(c) moieties. The enriched *E. coli*-expressed P46 and P65c proteins were used to immunize female BALB/c mice for the generation of anti-P46 and anti-P65(c) monoclonal antibodies (MAbs). The polypeptide specificities of MAbs obtained was confirmed by Western blotting with cell lysates prepared from the homologous strain. Cross-reactivity study of the anti-P46 and anti-P65(c) MAbs towards two other *M. hyopneumoniae* reference strains (ATCC 25095 and J strains) and Quebec field strains that had been isolated in culture, suggested that the MAbs obtained against both membranous proteins were directed against highly conserved species-specific epitopes. No reactivity to other mycoplasma species tested was demonstrated. Clinical signs and lesions suggestive of enzootic pneumonia were reproduced in specific-pathogen-free pigs that had been inoculated intratracheally with a virulent Quebec field strain (IAF-DM9827) of *M. hyopneumoniae*. Both anti-P46 and anti-P65(c) MAbs permitted effective detection by indirect immunofluorescence and indirect immunoperoxidase assay of *M. hyopneumoniae* in, respectively, frozen and formalin-fixed, paraffin-embedded lung sections from pigs that were killed after the 6- to 7-week observation period.

L30 ANSWER 6 OF 12 CABA COPYRIGHT 2005 CABI on STN

ACCESSION NUMBER: 2004:5533 CABA

DOCUMENT NUMBER: 20033190052

TITLE: Erysipelothrix rhusiopathiae YS-1: a live vaccine vector for mucosal delivery of recombinant proteins in pigs

AUTHOR: Shimoji, Y.

CORPORATE SOURCE: National Institute of Animal Health, 3-1-5
Kannondai, Tsukuba, Ibaraki 305-0856, Japan.
shimoji@affrc.go.jp

SOURCE: Recent Research Developments in Microbiology,
(2002) Vol. 6, No. 2, pp. 387-393. 37 ref.
Publisher: Research Signpost. Trivandrum

PUB. COUNTRY: India

DOCUMENT TYPE: Journal

LANGUAGE: English

ENTRY DATE: Entered STN: 20040112
Last Updated on STN: 20040112

AB *Erysipelothrix rhusiopathiae* YS-1 is a stable, acapsular **mutant** that was rationally developed by a novel mechanism using the self-conjugative transposon Tn916. With a new expression system for surface display of heterologous proteins on *E. rhusiopathiae*, the C-terminal portion of the P97 adhesin of *Mycoplasma hyopneumoniae*, the causative agent of enzootic pneumonia in **pigs**, was successfully expressed on the YS-1 strain. Intranasal vaccination of **piglets** with the recombinant YS-1 strain induced complete protection against *E. rhusiopathiae* infection and greatly reduced the severity of lung lesions after challenge of a virulent *M. hyopneumoniae*.

L30 ANSWER 7 OF 12 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN

ACCESSION NUMBER: 2002:212311 BIOSIS

DOCUMENT NUMBER: PREV200200212311

TITLE: **Immunogenicity** and antigenicity of
recombinant *E. coli*-expressed P46 and P65 membranous
proteins of *Mycoplasma hyopneumoniae*

AUTHOR(S): Cheikh Saad Bouh, K. [Reprint author]

CORPORATE SOURCE: INRS-Institut Armand-Frappier, Laval, PQ, Canada

SOURCE: Abstracts of the General Meeting of the American
Society for Microbiology, (2001) Vol. 101, pp. 385.
print.
Meeting Info.: 101st General Meeting of the American
Society for Microbiology. Orlando, FL, USA. May 20-24,
2001. American Society of Microbiology.
ISSN: 1060-2011.

DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 27 Mar 2002
Last Updated on STN: 27 Mar 2002

AB *Mycoplasma hyopneumoniae* is the causative agent of enzootic **pig** pneumonia. Its genome encodes for several immunodominant proteins, among which the P46, P65 and P74 membranous lipoproteins, the P36 cytosolic protein and the P97 adhesin carrying species-specific antigenic determinants. The P46 and P65 lipoproteins are major **immunogens** which trigger early humoral immune response in **pigs**, the C-terminal region of P65 corresponding to the most **immunogenic** domain. As for several *Mycoplasma* genes, TGA codons are translated as tryptophan residues rather than corresponding to translational stop signals as in mammalian and other bacterial cells. For *M. hyopneumoniae*, the ORFs encoding for P46 (1257 bp) and P65 (1803 bp) possess 3 and 1 TGA codons, respectively. In the present study, the entire P46 and P65

genes of the reference ATCC-25934 strain of *M. hyopneumoniae* were amplified by PCR and oligonucleotide primers were also designed such as to permit directed **mutagenesis** of the TGA codons in TGG. The **mutated** genes were ligated into the procaryotic pGEX-4T1 **vector** and used to transform competent *E. coli*, strain BL21 cells to produce recombinant (rec) proteins fused to glutathione S-transferase (GST). The affinity-purified GST-P65c and GST-P46 rec fusion proteins were used to immunize SPF **piglets**, as well as, Balb/c mice for production of monoclonal antibodies. Specific humoral immune responses were induced in both animal species, high antibody titers being detected by indirect ELISA. The specificities of MAb towards the rec proteins and the native membranous proteins were confirmed by western blotting and ELISA. Clinical signs and lesions suggestive of enzootic pneumonia were reproduced in SPF **pigs** experimentally-infected with a virulent Quebec field strain (IAF-DM9827). *M. hyopneumoniae* could be recovered by both PCR and cultivation procedures from lung homogenates of **pigs** that were killed after the 3-week observation period. MAb against both proteins permitted effective detection of *M. hyopneumoniae* in lungs from infected **pigs** by indirect immunofluorescence or immunoperoxidase.

L30 ANSWER 8 OF 12 MEDLINE on STN
 ACCESSION NUMBER: 2001381435 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 11162190
 TITLE: Oral immunization of swine with attenuated *Salmonella typhimurium* aroA SL3261 expressing a recombinant antigen of *Mycoplasma hyopneumoniae* (NrdF) primes the immune system for a NrdF specific secretory IgA response in the lungs.
 AUTHOR: Fagan P K; Walker M J; Chin J; Eamens G J; Djordjevic S P
 CORPORATE SOURCE: Department of Biological Sciences, University of Wollongong, Camden, N.S.W., Australia.
 SOURCE: Microbial pathogenesis, (2001 Feb) 30 (2) 101-10. Journal code: 8606191. ISSN: 0882-4010.
 PUB. COUNTRY: England: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200107
 ENTRY DATE: Entered STN: 20010709
 Last Updated on STN: 20010709
 Entered Medline: 20010705

AB *Salmonella typhimurium* SL3261 (aroA **mutant**) expressing a recombinant *Mycoplasma hyopneumoniae* antigen was used to orally immunize swine against porcine enzootic pneumonia. This construct, designated S. typhimurium aro A SL3261 (pKF1), expressed a recombinant protein containing the carboxy-terminal 11 kDa of a 42 kDa *M. hyopneumoniae* NrdF ribonucleotide reductase R2 subunit protein. Here we demonstrate that this antigen is present in all seven geographically diverse strains of *M. hyopneumoniae* tested, and is recognized by the swine immune system after experimental infection with the virulent *M. hyopneumoniae* Beaufort strain. The immune response of swine orally immunized twice with S. typhimurium SL3261 (pKF1) on day 0 and day 14 was evaluated. Oral immunization with S. typhimurium SL3261 (pKF1) primed the immune system to elicit a significant ($P < 0.05$)

secretory IgA response against the 15 kDa NrdF antigen in the respiratory tract of swine, post-challenge, compared to control groups. Blood lymphocytes from swine immunized with *S. typhimurium* SL3261 (pKF1) proliferated significantly ($P < 0.05$) following stimulation with *M. hyopneumoniae* whole-cell extracts compared to control groups 14 days post-vaccination. Following challenge with virulent *M. hyopneumoniae*, swine immunized with *S. typhimurium* SL3261 (pKF1) showed higher average daily weight gains and reduced lung pathology compared to control groups.

Copyright 2001 Crown Copyright.

L30 ANSWER 9 OF 12 VETU COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 2001-61950 VETU

TITLE: Procaryotic expression and antigenicity of
Mycoplasma hyopneumoniae P46 and P65
membranous proteins.

AUTHOR: Cheikh Saad Bouh K; Wilson L; Boisvert A; Sawyer N;
Shareck F; Dea S

CORPORATE SOURCE: Univ.Quebec

LOCATION: Laval, Que., Can.

SOURCE: Conf.Res.Workers Anim.Dis. (81 Meet., 152, 2000)

AVAIL. OF DOC.: Center of Microbiology and Biotechnology, INRS-Institut
Armand-Frappier, University of Quebec, Laval, Quebec,
Canada, H7NV 1B7.

LANGUAGE: English

DOCUMENT TYPE: Journal

FIELD AVAIL.: AB; LA; CT

AN 2001-61950 VETU

AB The *Mycoplasma hyopneumoniae* genome encodes for the immunodominant proteins P46, P65, P74, P36 and P97. The P46 and P65 lipoproteins are major **immunogens** which trigger an early humoral immune response in **pigs**, and in the case of P65, its C terminal region corresponds to the most **immunogenic** domain. In mycoplasmal genes, the codon TGA is translated as tryptophan rather than corresponding to a translational stop signal, as in mammalian and other bacterial cells. For *M. hyopneumoniae*, the ORFs encoding for the P46 (1257 bp) and P65 (1803 bp) possess 3 and 1 TGA codons, respectively. In this study, immunization of **piglets** and mice with affinity purified GST-P65 and GST-P46 recombinant fusion proteins resulted in high specific antibody responses. (conference abstract: Conference of Research Workers in Animal Diseases, 81st Annual Meeting, Chicago, Illinois, USA, November, 2000).

ABEX The entire P46 and P65 genes of the reference ATCC-25934 strain of *M. hyopneumoniae* were amplified by PCR, and oligonucleotide primers were designed to permit directed **mutagenesis** of the TGA codons in the TGG. The **mutated** genes were ligated into the procaryotic pGEX-4T1 **vector** and used to transform competent *E. coli*, strain BL21 cells, to produce recombinant proteins fused to glutathione S-transferase (GST). The affinity-purified GST-P65 and GST-P46 recombinant fusion proteins were used to immunize SPF **piglets**, as well as female Balb/c mice for monoclonal antibody (MAb) production. Specific humoral immune responses were induced in both animal species, high antibody titers being detected by indirect ELISA. The specificity of MAb towards the recombinant proteins and the native membranous proteins was confirmed by Western blotting and ELISA. (CLW)

L30 ANSWER 10 OF 12 MEDLINE on STN DUPLICATE 4
 ACCESSION NUMBER: 95270693 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 7751376
 TITLE: Recombinant 46-kilodalton surface antigen (P46) of *Mycoplasma hyopneumoniae* expressed in *Escherichia coli* can be used for early specific diagnosis of mycoplasmal pneumonia of swine by enzyme-linked immunosorbent assay.
 AUTHOR: Futo S; Seto Y; Okada M; Sato S; Suzuki T; Kawai K; Imada Y; Mori Y
 CORPORATE SOURCE: United Graduate School of Agricultural Sciences, Gifu University, Japan.
 SOURCE: Journal of clinical microbiology, (1995 Mar) 33 (3) 680-3.
 Journal code: 7505564. ISSN: 0095-1137.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 OTHER SOURCE: GENBANK-D16682
 ENTRY MONTH: 199506
 ENTRY DATE: Entered STN: 19950629
 Last Updated on STN: 19950629
 Entered Medline: 19950622

AB The 46-kDa surface antigen (P46) is the early and species-specific immunogenic protein of *Mycoplasma hyopneumoniae*. Three TGA codons encoding tryptophan in the P46 gene were replaced with TGG by an in vitro mutagenesis technique. The mutated P46 gene was expressed in *Escherichia coli* by using the chelating peptide tag system. The purified recombinant P46 was successfully used in an enzyme-linked immunosorbent assay for detection of antibodies against *M. hyopneumoniae* in swine serum. It did not cross-react with sera from swine infected with *Mycoplasma flocculate*, *Mycoplasma hyorhinis*, or *Mycoplasma hyosynoviae*. With this method, mycoplasmal pneumonia of swine was detectable within 2 weeks after infection.

L30 ANSWER 11 OF 12 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
 ACCESSION NUMBER: 1994:704549 SCISEARCH
 THE GENUINE ARTICLE: PP092
 TITLE: BACTERIAL IMMUNOGENS AND PROTECTIVE IMMUNITY IN SWINE
 AUTHOR: WANNEMUEHLER M J (Reprint); GALVIN J E
 CORPORATE SOURCE: IOWA STATE UNIV SCI & TECHNOL, VET MED RES INST, DEPT MICROBIOL IMMUNOL & PREVENT MED, AMES, IA 50011 (Reprint)
 COUNTRY OF AUTHOR: USA
 SOURCE: VETERINARY IMMUNOLOGY AND IMMUNOPATHOLOGY, (OCT 1994) Vol. 43, No. 1-3, pp. 117-126.
 ISSN: 0165-2427.
 PUBLISHER: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
 DOCUMENT TYPE: General Review; Journal
 FILE SEGMENT: LIFE; AGRI
 LANGUAGE: English
 REFERENCE COUNT: 60
 ENTRY DATE: Entered STN: 1994

Last Updated on STN: 1994

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB This review provides a limited discussion of antibody-mediated immune responses to bacterial pathogens which cause disease in swine. Serum antibody titers or responses have been used to correlate immunization or convalescence with protection from a given disease or infectious agent. Though much effort has been devoted to the elucidation of the host's antibody response to bacterial antigens, there are limited examples where an antibody response to a singular antigen has induced protection from disease. Antibody responses have been shown to be very effective in neutralizing bacterial exotoxins, e.g. *Escherichia*, *Pasteurella*, *Actinobacillus*, and inhibiting the ability of bacterial pathogens to colonize mucosal surfaces, e.g. *Escherichia*, *Salmonella*. The protective role of monospecific antibody responses to other bacterial components are less clear; however, antibody responses are generally polyclonal in nature and are an important component of the host immune response following the onset of disease. Anticapsular antibodies have been shown to enhance phagocytosis of numerous pathogens, e.g. *Actinobacillus*, *Streptococcus*, *Pasteurella*. Humoral immune responses directed against the lipopolysaccharide (LPS) of many Gram-negative organisms have been shown to enhance phagocytosis and the activation of complement, e.g. *Salmonella*. Anti-LPS antibodies have also aided in the identification of the serotypic diversity of Gram-negative organisms, e.g. *Serpulina*, *Salmonella*, *Pasteurella*. Antibody responses to the outer membrane proteins of Gram-negative organisms enhance phagocytosis, activation of complement, or inhibit bacterial adhesion to host cell. Adhesion of Gram-positive microorganisms, e.g. *Staphylococcus*, *Streptococcus*, *Clostridium*, to eukaryotic cells can be inhibited by antibody against the peptidoglycan and these peptidoglycan-specific antibodies may also facilitate opsonization of these organisms. *Mycoplasma* species have been shown to be metabolically inhibited by antibody directed against membrane proteins. In addition to the protective aspects of humoral immunity, the host's antibody response has been used as a diagnostic and epidemiological tool to identify or determine the prevalence of infectious agents.

L30 ANSWER 12 OF 12 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation
on STN

ACCESSION NUMBER: 1991:196511 SCISEARCH

THE GENUINE ARTICLE: FD915

TITLE: CLONING AND EXPRESSION OF A SPECIES-SPECIFIC EARLY
IMMUNOGENIC 36-KILODALTON PROTEIN OF
MYCOPLASMA-HYOPNEUMONIAE IN
ESCHERICHIA-COLI

AUTHOR: STRASSER M (Reprint); FREY J; BESTETTI G; KOBISCH M;
NICOLET J

CORPORATE SOURCE: UNIV BERN, INST VET BACTERIOL, CH-3012 BERN,
SWITZERLAND; UNIV BERN, INST VET PATHOL, CH-3012 BERN,
SWITZERLAND; CNEVA, LCRAP, PATHOL PORCINE STN, F-22440
PLOUFRAGAN, FRANCE

COUNTRY OF AUTHOR: SWITZERLAND; FRANCE

SOURCE: INFECTION AND IMMUNITY, (APR 1991) Vol. 59, No. 4, pp.
1217-1222.

ISSN: 0019-9567.

PUBLISHER: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW,
WASHINGTON, DC 20005-4171.

DOCUMENT TYPE: Article; Journal

FILE SEGMENT: LIFE

10/607631

LANGUAGE: English
REFERENCE COUNT: 25
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB **Mycoplasma hyopneumoniae**, the etiologic agent of **porcine** enzootic pneumonia, synthesizes a 36-kDa protein which is an early and strong **immunogenic** factor in experimentally and naturally infected **swine**. The gene encoding this protein was cloned by screening a gene library of **M. hyopneumoniae** DNA with rabbit hyperimmune serum made against whole **M. hyopneumoniae** cells and convalescent-phase **swine** serum. Analysis of the recombinant protein expressed in *Escherichia coli* by immunoblot techniques showed that the protein is expressed in *E. coli* in its full length and does not cross-react with proteins from *M. flocculare* or *M. hyorhinis*. Genetic analysis showed that the gene was expressed from the lac promoter of the **vector** and seems to be translationally initiated from its own ribosome binding site. Subcloning in a transcriptional fusion **vector** to optimize expression resulted in production of the 36-kDa protein in *E. coli* at levels up to 30% of total protein.

FILE 'MEDLINE' ENTERED AT 12:24:05 ON 22 NOV 2005

FILE LAST UPDATED: 16 NOV 2005 (20051116/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

L31	43	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	"MYCOPLASMA HYOPNEUMONIAE"
			/CT			
L32	18814	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	MUTAGENESIS/CT
L33	54271	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	"POLYMORPHISM, GENETIC"/CT
L34	0	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	L31 AND (L32 OR L33)
L31	43	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	"MYCOPLASMA HYOPNEUMONIAE"
			/CT			
L35	124920	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	SWINE/CT
L36	39	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	L31 AND L35
L37	4	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	L36 AND ADMINISTRATION & DOSAGE/CT

L37 ANSWER 1 OF 4 MEDLINE on STN

Searcher : Shears 571-272-2528

10/607631

ACCESSION NUMBER: 2005428351 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16094568
TITLE: Efficacy of tulathromycin injectable solution for the treatment of naturally occurring Swine respiratory disease.
AUTHOR: Nutsch Robert G; Hart Fred J; Rooney Kathleen A; Weigel Daniel J; Kilgore W Randal; Skogerboe Terry L
CORPORATE SOURCE: Pfizer Animal Health, Veterinary Medicine Research and Development, Kalamazoo, MI 49001, USA.
SOURCE: Veterinary therapeutics : research in applied veterinary medicine, (2005 Summer) 6 (2) 214-24.
Journal code: 100936368. ISSN: 1528-3593.
PUB. COUNTRY: United States
DOCUMENT TYPE: (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(MULTICENTER STUDY)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200510
ENTRY DATE: Entered STN: 20050815
Last Updated on STN: 20051021
Entered Medline: 20051020

ED Entered STN: 20050815
Last Updated on STN: 20051021
Entered Medline: 20051020

AB Tulathromycin, a novel triamilide antimicrobial, was evaluated for treatment of swine respiratory disease (SRD) in field efficacy studies involving 720 pigs in six North American swine herds. In each study, feeder pigs with clinical SRD were randomly assigned in equal numbers to a group treated with tulathromycin given as a single injection at 2.5 mg/kg of body weight or to a saline-treated control group. Four of the studies included a third group treated with ceftiofur sodium for 3 consecutive days at 3 mg/kg of body weight. Pigs were treated on day 0 and evaluated for treatment response on day 7. In each study, 10 or more nontreated pigs and saline-treated pigs that did not respond to treatment underwent necropsies to obtain lung samples that were evaluated for SRD pathogens. The overall cure rate was 46.4% for saline-treated pigs, 71.1% for tulathromycin-treated pigs, and 63.1% for ceftiofur-treated pigs. The cure rate for tulathromycin-treated pigs was significantly higher than for saline-treated pigs ($P = .0116$). Mortality from SRD occurred in 24 control pigs, seven tulathromycin-treated pigs, and one ceftiofur-treated pig. The mortality rate was significantly lower for both the tulathromycin- and ceftiofur-treated pigs compared with those treated with saline ($P = .0148$ and $P = .0195$, respectively). *Actinobacillus pleuropneumoniae*, *Pasteurella multocida*, *Haemophilus parasuis*, and *Mycoplasma hyopneumoniae*, bacteria commonly associated with SRD, were isolated from SRD-affected pigs. Under field conditions, tulathromycin injectable solution given as a single IM dose of 2.5 mg/kg of body weight was safe and effective in the treatment of SRD.

L37 ANSWER 2 OF 4 MEDLINE on STN
ACCESSION NUMBER: 2005428349 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16094566
TITLE: Evaluation of tulathromycin for the treatment of pneumonia following experimental infection of swine with *Mycoplasma hyopneumoniae*.
AUTHOR: McKelvie Jo; Morgan Jeremy H; Nanjiani Ian A;

Searcher : Shears 571-272-2528

Sherington John; Rowan Tim G; Sunderland Simon J
CORPORATE SOURCE: Veterinary Medicine Research and Development, Pfizer Ltd, Sandwich, Kent, UK.

SOURCE: Veterinary therapeutics : research in applied veterinary medicine, (2005 Summer) 6 (2) 197-202.
Journal code: 100936368. ISSN: 1528-3593.

PUB. COUNTRY: United States

DOCUMENT TYPE: (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200510

ENTRY DATE: Entered STN: 20050815
Last Updated on STN: 20051021
Entered Medline: 20051020

ED Entered STN: 20050815
Last Updated on STN: 20051021
Entered Medline: 20051020

AB Tulathromycin was evaluated in the treatment of pneumonia in weaned pigs inoculated intranasally with *Mycoplasma hyopneumoniae*. Five days postchallenge, the pigs were randomized to treatment with a single IM administration of saline, a single IM administration of tulathromycin (2.5 mg/kg; day 0), or three IM administrations of enrofloxacin (5.0 mg/kg; days 0, 1, 2). Pigs were necropsied on day 12 or 13. Unchallenged controls remained healthy with no lung pathology. Compared with saline, coughing, mean lung lesion score, and proportional lung weight were significantly reduced and weight gain was significantly greater for tulathromycin-treated pigs ($P < .05$). Compared with enrofloxacin, there were no significant differences in proportional lung weight or weight gains, but coughing and lung lesion scores were greater for tulathromycin-treated pigs ($P < .05$). Tulathromycin was effective in the treatment of pneumonia following experimental infection with *M. hyopneumoniae*.

L37 ANSWER 3 OF 4 MEDLINE on STN

ACCESSION NUMBER: 2005242233 MEDLINE

DOCUMENT NUMBER: PubMed ID: 15879541

TITLE: Efficacy of in-feed medication with tylosin for the treatment and control of *Mycoplasma hyopneumoniae* infections.

AUTHOR: Vicca J; Maes D; Jonker L; de Kruif A; Haesebrouck F

CORPORATE SOURCE: Department of Reproduction, Obstetrics and Herd Health, Faculty of Veterinary Medicine, Ghent University, Salisburylaan 133, B-9820 Merelbeke, Belgium.

SOURCE: Veterinary record, (2005 May 7) 156 (19) 606-10.
Journal code: 0031164. ISSN: 0042-4900.

PUB. COUNTRY: England: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200508

ENTRY DATE: Entered STN: 20050510
Last Updated on STN: 20050815
Entered Medline: 20050811

ED Entered STN: 20050510
Last Updated on STN: 20050815
Entered Medline: 20050811

AB The efficacy of in-feed medication with tylosin for the treatment of

enzootic pneumonia was examined in an experimental *Mycoplasma hyopneumoniae* infection model. One group of 10 conventional *M. hyopneumoniae*-free pigs was inoculated intratracheally with a highly virulent field isolate of *M. hyopneumoniae*; a second group of 10 pigs was inoculated in the same way and after 12 days was given tylosin at 100 mg/kg feed for 21 days; a third group of 10 pigs was inoculated with sterile culture medium, and these pigs were not given tylosin. The pigs were examined daily for clinical signs and each pig was given a respiratory disease score. Thirty-three days after they had been infected the pigs were euthanased, the lung lesions were quantified and samples of lung were processed for immunofluorescence testing for *M. hyopneumoniae*. The mean (sd) respiratory disease and lung lesion scores were significantly higher ($P < 0.05$) in both the infected groups than in the uninfected group. Between 23 and 33 days after infection the mean respiratory disease score of the pigs treated with tylosin was 0.54 (0.22), significantly ($P < 0.05$) lower than that of the infected pigs which were left untreated, 1.54 (0.46); similarly, their average lung lesion score, 1.72 (1.20), was significantly lower than that of the untreated pigs, 5.27 (3.85).

L37 ANSWER 4 OF 4 MEDLINE on STN
 ACCESSION NUMBER: 2004252126 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 15149792
 TITLE: Effects of *Mycoplasma hyopneumoniae* vaccine on pigs naturally infected with *M. hyopneumoniae* and porcine reproductive and respiratory syndrome virus.
 AUTHOR: Moreau Isabelle A; Miller Gay Y; Bahnson Peter B
 CORPORATE SOURCE: Department of Veterinary Clinical Medicine, The University of Illinois at Urbana-Champaign, Urbana, IL, USA.
 SOURCE: Vaccine, (2004 Jun 2) 22 (17-18) 2328-33.
 Journal code: 8406899. ISSN: 0264-410X.
 PUB. COUNTRY: Netherlands
 DOCUMENT TYPE: (CLINICAL TRIAL)
 Journal; Article; (JOURNAL ARTICLE)
 (RANDOMIZED CONTROLLED TRIAL)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200501
 ENTRY DATE: Entered STN: 20040520
 Last Updated on STN: 20050119
 Entered Medline: 20050118
 ED Entered STN: 20040520
 Last Updated on STN: 20050119
 Entered Medline: 20050118
 AB The effects of a single-dose *Mycoplasma hyopneumoniae* vaccine was studied in growing pigs. Each of 24 vaccinated cohorts of approximately 1200 pigs reared in separate barns was matched by time, farm site, and sex with unvaccinated cohorts. Pigs were naturally exposed to *M. hyopneumoniae* and porcine reproductive respiratory syndrome virus (PRRSv). Daily weight gain was 42 g per pig per day higher and mortality rate was 15.2/1000 pigs lower for vaccinated cohorts. Age at PRRSv onset was associated with mortality rate, but did not modify vaccine effects. *M. hyopneumoniae* vaccination was effective in promoting growth in spite of concurrent PRRSv infection.

FILE 'USPATFULL' ENTERED AT 12:27:17 ON 22 NOV 2005
 CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 22 Nov 2005 (20051122/PD)
 FILE LAST UPDATED: 22 Nov 2005 (20051122/ED)
 HIGHEST GRANTED PATENT NUMBER: US6968571
 HIGHEST APPLICATION PUBLICATION NUMBER: US2005257307
 CA INDEXING IS CURRENT THROUGH 22 Nov 2005 (20051122/UPCA)
 ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 22 Nov 2005 (20051122/PD)
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2005
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2005

>>> USPAT2 is now available. USPATFULL contains full text of the <<<
 >>> original, i.e., the earliest published granted patents or <<<
 >>> applications. USPAT2 contains full text of the latest US <<<
 >>> publications, starting in 2001, for the inventions covered in <<<
 >>> USPATFULL. A USPATFULL record contains not only the original <<<
 >>> published document but also a list of any subsequent <<<
 >>> publications. The publication number, patent kind code, and <<<
 >>> publication date for all the US publications for an invention <<<
 >>> are displayed in the PI (Patent Information) field of USPATFULL <<<
 >>> records and may be searched in standard search fields, e.g., /PN, <<<
 >>> /PK, etc. <<<

>>> USPATFULL and USPAT2 can be accessed and searched together <<<
 >>> through the new cluster USPATALL. Type FILE USPATALL to <<<
 >>> enter this cluster. <<<
 >>> <<<
 >>> Use USPATALL when searching terms such as patent assignees, <<<
 >>> classifications, or claims, that may potentially change from <<<
 >>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate
 substance identification.

L45 24 SEA ABB=ON PLU=ON ((MYCOPLASM? OR M) (W)HYOPNEUMON?) (S) (MU
 TAT? OR MUTANT? OR MUTAGEN? OR POLYMORPH? OR POLY MORPH?)
 L46 3 SEA ABB=ON PLU=ON L45(S)IMMUNOGEN?
 L47 7 SEA ABB=ON PLU=ON L45(S)(PORCINE OR HOG OR PIG OR PIGLET
 OR SWINE)
 L48 3 SEA ABB=ON PLU=ON L45(S)VECTOR
 L49 2 SEA ABB=ON PLU=ON L45(S)ADMIN?
 L50 10 SEA ABB=ON PLU=ON L46 OR L47 OR L48 OR L49

L50 ANSWER 1 OF 10 USPATFULL on STN
 ACCESSION NUMBER: 2005:62586 USPATFULL
 TITLE: Safe mutant viral vaccines
 INVENTOR(S): Welch, Siao-Kun Wan, Kalamazoo, MI, UNITED STATES
 Calvert, Jay Gregory, Otsego, MI, UNITED STATES
 O'Hara, Michael K., Kalamazoo, MI, UNITED STATES
 Cao, Xuemei, Scituate, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005053621	A1	20050310
APPLICATION INFO.:	US 2004-893712	A1	20040716 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-490834P	20030729 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	

LEGAL REPRESENTATIVE: SCULLY SCOTT MURPHY & PRESSER, PC, 400 GARDEN CITY
PLAZA, GARDEN CITY, NY, 11530
NUMBER OF CLAIMS: 40
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 1 Drawing Page(s)
LINE COUNT: 2359

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides safe vaccines and methods of preparing such vaccines. The vaccines of the present invention contain at least two live mutant viruses of the same family or nucleic acid molecules encoding such viruses, wherein each of the two viruses or the encoding nucleic acids contains a mutation that confers a desirable phenotype and the mutations in the viruses reside in the same genomic site such that the mutant viruses cannot recombine with each other to eliminate the mutations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L50 ANSWER 2 OF 10 USPATFULL on STN

ACCESSION NUMBER: 2004:120491 USPATFULL
TITLE: Immunogenic Mycoplasma hyopneumoniae polypeptides
INVENTOR(S): Minion, F. Chris, Ames, IA, UNITED STATES
Djordjevic, Steven P., Ema Heights, AUSTRALIA

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004091901	A1	20040513
APPLICATION INFO.:	US 2003-607631	A1	20030627 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-392632P	20020628 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	FISH & RICHARDSON P.C., 3300 DAIN RAUSCHER PLAZA, 60 SOUTH SIXTH STREET, MINNEAPOLIS, MN, 55402	
NUMBER OF CLAIMS:	27	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	23 Drawing Page(s)	
LINE COUNT:	4128	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Mycoplasma hyopneumoniae polypeptides and nucleic acids, as well as nucleic acid expression vectors and host cells containing nucleic acid vectors are provided. In addition, compositions containing M. hyopneumoniae polypeptides and nucleic acids are provided for use in methods of treating swine to prevent enzootic pneumonia. Furthermore, the invention provides diagnostic tests for the detecting of M. hyopneumoniae infection in swine herds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L50 ANSWER 3 OF 10 USPATFULL on STN

ACCESSION NUMBER: 2003:232060 USPATFULL
TITLE: Vaccine adjuvant
INVENTOR(S): Minion, F. Chris, Ames, IA, UNITED STATES
Menon, Sreekumar A., Philadelphia, PA, UNITED STATES
Mahairas, Gregory G., Seattle, WA, UNITED STATES
PATENT ASSIGNEE(S): Iowa State University Research Foundation, Inc., an

10/607631

Iowa corporation (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003162260	A1	20030828
APPLICATION INFO.:	US 2003-384948	A1	20030310 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2000-692064, filed on 19 Oct 2000, GRANTED, Pat. No. US 6537552		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-160249P	19991019 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	FISH & RICHARDSON P.C., 3300 DAIN RAUSCHER PLAZA, 60 SOUTH SIXTH STREET, MINNEAPOLIS, MN, 55402	
NUMBER OF CLAIMS:	7	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	7 Drawing Page(s)	
LINE COUNT:	1632	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention features fusion agents such as fusion proteins that are useful for the treatment of and prevention from diseases that are susceptible to the effects of cellular (Th1 type) immune responses. Also encompassed by the invention are nucleic acids encoding the fusion proteins of the invention, vectors containing the nucleic acids, and cells containing the vectors. The invention includes methods of making and using the fusion agents of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L50 ANSWER 4 OF 10 USPATFULL on STN
ACCESSION NUMBER: 2003:176178 USPATFULL
TITLE: Temperature-sensitive live vaccine for Mycoplasma hyopneumoniae
INVENTOR(S): Pijoan, Carlos, Shoreview, MN, United States
PATENT ASSIGNEE(S): Regents of the University of Minnesota, Minneapolis, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6585981	B1	20030701
APPLICATION INFO.:	US 2000-627006		20000727 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Graser, Jennifer E.		
LEGAL REPRESENTATIVE:	Schwegman, Lundberg, Woessner & Kluth, P.A.		
NUMBER OF CLAIMS:	17		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)		
LINE COUNT:	593		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a live temperature-sensitive vaccine for Mycoplasma hyopneumoniae. The present invention also provides methods of vaccinating a swine against colonization or infection of Mycoplasma hyopneumoniae.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Searcher : Shears 571-272-2528

L50 ANSWER 5 OF 10 USPATFULL on STN

ACCESSION NUMBER: 2003:169096 USPATFULL
 TITLE: Nucleic acid sequences and expression system
 relating to Enterococcus faecium for diagnostics
 and therapeutics
 INVENTOR(S): Doucette-Stamm, Lynn A., Framingham, MA, United
 States
 Bush, David, Somerville, MA, United States
 PATENT ASSIGNEE(S): Genome Therapeutics Corporation, Waltham, MA,
 United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6583275	B1	20030624
APPLICATION INFO.:	US 1998-107532		19980630 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-85598P	19980514 (60)
	US 1997-51571P	19970702 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Marschel, Ardin H.	
LEGAL REPRESENTATIVE:	Genome Therapeutics Corporation	
NUMBER OF CLAIMS:	34	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)	
LINE COUNT:	15265	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides isolated polypeptide and nucleic acid
 sequences derived Enterococcus faecium that are useful in diagnosis
 and therapy of pathological conditions; antibodies against the
 polypeptides; and methods for the production of the polypeptides.
 The invention also provides methods for the detection, prevention
 and treatment of pathological conditions resulting from bacterial
 infection.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L50 ANSWER 6 OF 10 USPATFULL on STN

ACCESSION NUMBER: 2003:81455 USPATFULL
 TITLE: Vaccine adjuvant
 INVENTOR(S): Minion, F. Chris, Ames, IA, United States
 Menon, Sreekumar A., Philadelphia, PA, United
 States
 Mahairas, Gregory G., Seattle, WA, United States
 PATENT ASSIGNEE(S): Iowa State University Research Foundation, Ames,
 IA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6537552	B1	20030325
APPLICATION INFO.:	US 2000-692064		20001019 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-160429P	19991019 (60)
DOCUMENT TYPE:	Utility	

FILE SEGMENT: GRANTED
 PRIMARY EXAMINER: Smith, Lynette R. F.
 ASSISTANT EXAMINER: Shannan-Shah, Khatol S
 LEGAL REPRESENTATIVE: Fish & Richardson P.C.
 NUMBER OF CLAIMS: 8
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 10 Drawing Figure(s); 7 Drawing Page(s)
 LINE COUNT: 1611

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention features fusion agents such as fusion proteins that are useful for the treatment of and prevention from diseases that are susceptible to the effects of cellular (Th1 type) immune responses. Also encompassed by the invention are nucleic acids encoding the fusion proteins of the invention, vectors containing the nucleic acids, and cells containing the vectors. The invention includes methods of making and using the fusion agents of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L50 ANSWER 7 OF 10 USPATFULL on STN

ACCESSION NUMBER: 1998:91598 USPATFULL
 TITLE: DNA sequences coding for mycoplasma hyopneumoniae surface antigens, corresponding proteins and use in vaccines and diagnostic procedures
 INVENTOR(S): Wise, Kim S., Columbia, MO, United States
 McIntosh, Mark A., Columbia, MO, United States
 PATENT ASSIGNEE(S): The Curators of the University of Missouri, Columbia, MO, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5788962		19980804
APPLICATION INFO.:	US 1996-703947		19960828 (8)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1995-373957, filed on 17 Jan 1995, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Housel, James C.		
ASSISTANT EXAMINER:	Shaver, Jennifer		
LEGAL REPRESENTATIVE:	Fishel, Grace J.		
NUMBER OF CLAIMS:	3		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	9 Drawing Figure(s); 17 Drawing Page(s)		
LINE COUNT:	713		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Mycoplasma hyopneumoniae P65 surface antigens prepared by recombinant DNA or synthetic methods, protein antigens encoded by P65 gene, an expression vector and transformed host containing the antigens, a vaccine based on such antigens, methods of treating swine, etc. to prevent enzootic pneumonia using that vaccine and diagnostic tests to detect the presence of Mycoplasma hyopneumoniae.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L50 ANSWER 8 OF 10 USPATFULL on STN

ACCESSION NUMBER: 97:91172 USPATFULL
 TITLE: Vaccines against Aujeszky's disease and other animal diseases containing pseudorabies virus

mutants
 INVENTOR(S): Peeters, Bernardus Petrus Hubertus, Lelystad, Netherlands
 Pol, Jan Marie Antonius, Lelystad, Netherlands
 Gielkens, Arnold Leonard Josef, Lelystad, Netherlands
 Moormann, Robertus Jacobus Maria, Dronten, Netherlands
 PATENT ASSIGNEE(S): Akzo Nobel N.V., Arnhem, Netherlands (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5674500		19971007
	WO 9401573		19940120
APPLICATION INFO.:	US 1995-373325		19950109 (8)
	WO 1993-NL146		19930708
			19950109 PCT 371 date
			19950109 PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	EP 1992-202096	19920709
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Mosher, Mary E.	
LEGAL REPRESENTATIVE:	Gormley, Mary E.	
NUMBER OF CLAIMS:	10	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 2 Drawing Page(s)	
LINE COUNT:	1089	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides vaccines for preventing and controlling animal diseases, comprising a pseudorabies virus containing glycoprotein gp50 and having a mutation in its gp50 gene. The vaccines are suitable for use against Aujeszky's disease (pseudorabies), or against other animal diseases when the mutation is an insertion comprising a heterologous gene encoding an antigen corresponding to said animal disease. The pseudorabies virus may additionally have at least one mutation in one of its other genes, such as the gp63 gene or the gI gene. The vaccines are unable to spread from vaccinated to non-vaccinated animals.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L50 ANSWER 9 OF 10 USPATFULL on STN
 ACCESSION NUMBER: 95:92697 USPATFULL
 TITLE: DNA encoding 85kd polypeptide useful in diagnosis of Mycoplasma infections in animals
 INVENTOR(S): Kuner, Jerry, Longmont, CO, United States
 Ko, Christine, Boulder, CO, United States
 PATENT ASSIGNEE(S): Synergen, Inc., Boulder, CO, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5459048		19951017
APPLICATION INFO.:	US 1993-153495		19931117 (8)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1992-962075, filed on		

16 Oct 1992, now abandoned which is a continuation of Ser. No. US 1990-502640, filed on 2 Apr 1990, now abandoned which is a continuation-in-part of Ser. No. US 1988-196891, filed on 18 May 1988, now abandoned which is a continuation of Ser. No. US 1986-889153, filed on 25 Jul 1986, now abandoned

DOCUMENT TYPE: Utility
 FILE SEGMENT: Granted
 PRIMARY EXAMINER: Lacey, David L.
 ASSISTANT EXAMINER: Nisbet, T. Michael
 LEGAL REPRESENTATIVE: Finnegan, Henderson, Farabow, Garrett & Dunner
 NUMBER OF CLAIMS: 6
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 39 Drawing Figure(s); 39 Drawing Page(s)
 LINE COUNT: 2298

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A class of polypeptides useful in an in vitro diagnosis of Mycoplasma infection in animals is disclosed. These polypeptides are also capable of inducing an immune response in swine which were previously not exposed to Mycoplasma. Recombinant DNA methods for the production of these polypeptides and certain phage vectors and DNA sequences useful in these methods are also disclosed. Methods of vaccinating animals utilizing a vaccination composition which includes these polypeptides is also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L50 ANSWER 10 OF 10 USPATFULL on STN

ACCESSION NUMBER: 93:71858 USPATFULL
 TITLE: Intranasal administration of Mycoplasma hyopneumoniae antigen
 INVENTOR(S): Faulds, Daryl, Millbrae, CA, United States
 PATENT ASSIGNEE(S): ML Technology Ventures, L.P., New York, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5240706		19930831
APPLICATION INFO.:	US 1989-334586		19890407 (7)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Wityshyn, Michael G.		
ASSISTANT EXAMINER:	Mohamed, Abdel A.		
LEGAL REPRESENTATIVE:	Olstein, Elliot M., Lillie, Raymond J.		
NUMBER OF CLAIMS:	10		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	19 Drawing Figure(s); 20 Drawing Page(s)		
LINE COUNT:	1107		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for protecting an animal, in particular swine, against mycoplasma pneumonia by administering intranasally to the animal a vaccine containing one or more proteins which elicits an antibody which recognizes a Mycoplasma hyopneumoniae antigen which lacks immunosuppressive activity. A particularly preferred intranasal vaccine includes the 74.5 kDa antigen of Mycoplasma hyopneumoniae. The 74.5 kDa antigen may be of recombinant origin.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

10/607631

(FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB, USPATFULL' ENTERED AT 12:32:14 ON 22 NOV 2005)

L51 412 SEA ABB=ON PLU=ON ("MINION F"? OR "MINION C"?)/AU *- Author(s)*
L52 760 SEA ABB=ON PLU=ON "DJORDJEVIC S"?/AU
L53 14 SEA ABB=ON PLU=ON L51 AND L52
L54 1158 SEA ABB=ON PLU=ON L51 OR L52
L55 32 SEA ABB=ON PLU=ON L54 AND L18
L56 24 SEA ABB=ON PLU=ON L55 AND (SWINE OR PIG OR PIGLET OR HOG
OR PORCINE)
L57 35 SEA ABB=ON PLU=ON L53 OR L56
L58 12 DUP REM L57 (23 DUPLICATES REMOVED)

L58 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2005:1064099 CAPLUS

TITLE: Characterization of In Vivo Acquired Resistance of
Mycoplasma hyopneumoniae to
Macrolides and Lincosamides

AUTHOR(S): Stakenborg, Tim; Vicca, Jo; Butaye, Patrick; Maes,
Dominiek; **Minion, F. Chris**; Peeters,
Johan; De Kruif, Aart; Haesebrouck, Freddy

CORPORATE SOURCE: Veterinary and Agrochemical Research Centre,
Brussels, Belg.

SOURCE: Microbial Drug Resistance (Larchmont, NY, United
States) (2005), 11(3), 290-294
CODEN: MDREFJ; ISSN: 1076-6294

PUBLISHER: Mary Ann Liebert, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Macrolides and related antibiotics are used to control mycoplasma infections in the **pig** industry worldwide. Some **porcine** mycoplasmas, however, survive these treatments by acquiring resistance. The mechanism of acquired resistance to macrolides and lincosamides was studied in more detail for **Mycoplasma hyopneumoniae** by comparing both the phenotype and genotype of a resistant field isolate to five susceptible isolates. The MICs were significantly higher for the resistant strain for all antibiotics tested. The MICs for the 16-membered macrolide tylosin ranged from 8 to 16 µg for the resistant strain and from 0.03 to 0.125 µg/mL for the five susceptible strains. The MICs for the 15-membered macrolides and lincosamides were higher than 64 µg/mL for the resistant strain while only 0.06 to 0.5 µg/mL for the susceptible strains. **Mycoplasma hyopneumoniae** strains are intrinsically resistant to the 14-membered macrolides due to a G2057A transition (E. coli numbering) in their 23S rDNA. Therefore, high MICs were observed for all strains, although the MICs for the resistant strain were clearly increased. An addnl., acquired A2058G point **mutation** was found in the 23S rRNA gene of the resistant strain. No differences linked to resistance were found in the ribosomal proteins L4 and L22. The present study showed that 23S rRNA **mutations** resulting in resistance to macrolides and lincosamides as described in other *Mycoplasma* spp. also occur under field conditions in **M. hyopneumoniae**.

L58 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2004:20823 CAPLUS

DOCUMENT NUMBER: 140:110097

TITLE: Immunogenic polypeptides of **Mycoplasma**

Searcher : Shears 571-272-2528

hyopneumoniae and encoding nucleic acids
for diagnosis and therapy

INVENTOR(S): **Minion, Chris F.**; **Mañairas, Gregory G.**;
Djordjevic, Steven P.

PATENT ASSIGNEE(S): Iowa State University Research Foundation, Inc.,
USA; NSW Agriculture; Department of Agriculture
For and On Behalf of The State of New South Wales

SOURCE: PCT Int. Appl., 81 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004003161	A2	20040108	WO 2003-US20460	20030627
WO 2004003161	A3	20050428		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2004091901	A1	20040513	US 2003-607631	20030627
EP 1546357	A2	20050629	EP 2003-742308	20030627
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
PRIORITY APPLN. INFO.:			US 2002-392632P	P 20020628
			WO 2003-US20460	W 20030627

AB **Mycoplasma hyopneumoniae** polypeptides and nucleic acids, as well as nucleic acid expression vectors and host cells containing nucleic acid vectors are provided. In addition, comps. containing

M. hyopneumoniae polypeptides and nucleic acids are provided for use in methods of treating **swine** to prevent enzootic pneumonia. Furthermore, the invention provides diagnostic tests for the detecting of **M. hyopneumoniae** infection in **swine** herds.

L58 ANSWER 3 OF 12 USPATFULL on STN

ACCESSION NUMBER: 2004:120491 USPATFULL

TITLE: Immunogenic **Mycoplasma hyopneumoniae** polypeptides

INVENTOR(S): **Minion, F. Chris**, Ames, IA, UNITED STATES
Djordjevic, Steven P., Ema Heights, AUSTRALIA

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004091901	A1	20040513
APPLICATION INFO.:	US 2003-607631	A1	20030627 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-392632P	20020628 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	FISH & RICHARDSON P.C., 3300 DAIN RAUSCHER PLAZA, 60 SOUTH SIXTH STREET, MINNEAPOLIS, MN, 55402	
NUMBER OF CLAIMS:	27	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	23 Drawing Page(s)	
LINE COUNT:	4128	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Mycoplasma hyopneumoniae** polypeptides and nucleic acids, as well as nucleic acid expression vectors and host cells containing nucleic acid vectors are provided. In addition, compositions containing **M. hyopneumoniae** polypeptides and nucleic acids are provided for use in methods of treating swine to prevent enzootic pneumonia. Furthermore, the invention provides diagnostic tests for the detecting of **M. hyopneumoniae** infection in swine herds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L58 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 2004:372063 CAPLUS

DOCUMENT NUMBER: 141:85300

TITLE: Proteolytic processing of the Mycoplasma hyopneumoniae cilium adhesin

AUTHOR(S): Djordjevic, Steven P.; Cordwell, Stuart J.; Djordjevic, Michael A.; Wilton, Jody; Minion, F. Chris

CORPORATE SOURCE: Elizabeth Macarthur Agricultural Institute, New South Wales Agriculture, Camden, 2570, Australia

SOURCE: Infection and Immunity (2004), 72(5), 2791-2802
CODEN: INFIBR; ISSN: 0019-9567

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB **M. hyopneumoniae** is an economically significant swine pathogen that colonizes the respiratory ciliated epithelial cells. Cilium adherence is mediated by P97, a surface protein containing a repeating element (R1) that is responsible for binding. Here, we show that the cilium adhesin is proteolytically processed on the surface. Proteomic anal. of strain J proteins identified cleavage products of 22, 28, 66, and 94 kDa. N-terminal sequencing showed that the 66- and 94-kDa proteins possessed identical N termini and that the 66-kDa variant was generated by cleavage of the 28-kDa product from the C terminus. The 22-kDa product represented the N-terminal 195 amino acids of the cilium adhesin preprotein, confirming that the hydrophobic leader signal sequence is not cleaved during translocation across the membrane. Comparative studies of **M. hyopneumoniae** strain 232 showed that the major cleavage products of the cilium adhesin are similar, although P22 and P28 appear to be processed further in strain 232. Immunoblotting studies using antisera raised against peptide sequences within P22 and P66/P94 indicate that processing is complex, with cleavage occurring at different frequencies within multiple sites, and is strain specific. Immunogold electron microscopy showed that

fragments containing the cilium-binding site remained associated with the cell surface whereas cleavage products not containing the R1 element were located elsewhere. Not all secreted proteins undergo multiple cleavage, however, as evidenced by the anal. of the P102 gene product. The ability of *M. hyopneumoniae* to selectively cleave its secreted proteins provides this pathogen with a remarkable capacity to alter its surface architecture.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 5 OF 12 USPATFULL on STN

ACCESSION NUMBER: 2003:232060 USPATFULL

TITLE: Vaccine adjuvant

INVENTOR(S): **Minion, F. Chris**, Ames, IA, UNITED STATES

Menon, Sreekumar A., Philadelphia, PA, UNITED STATES

Mahairas, Gregory G., Seattle, WA, UNITED STATES

PATENT ASSIGNEE(S): Iowa State University Research Foundation, Inc., an Iowa corporation (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003162260	A1	20030828
APPLICATION INFO.:	US 2003-384948	A1	20030310 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2000-692064, filed on 19 Oct 2000, GRANTED, Pat. No. US 6537552		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-160249P	19991019 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	FISH & RICHARDSON P.C., 3300 DAIN RAUSCHER PLAZA, 60 SOUTH SIXTH STREET, MINNEAPOLIS, MN, 55402	
NUMBER OF CLAIMS:	7	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	7 Drawing Page(s)	
LINE COUNT:	1632	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention features fusion agents such as fusion proteins that are useful for the treatment of and prevention from diseases that are susceptible to the effects of cellular (Th1 type) immune responses. Also encompassed by the invention are nucleic acids encoding the fusion proteins of the invention, vectors containing the nucleic acids, and cells containing the vectors. The invention includes methods of making and using the fusion agents of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L58 ANSWER 6 OF 12 USPATFULL on STN

ACCESSION NUMBER: 2003:81455 USPATFULL

TITLE: Vaccine adjuvant

INVENTOR(S): **Minion, F. Chris**, Ames, IA, United States

Menon, Sreekumar A., Philadelphia, PA, United States

Mahairas, Gregory G., Seattle, WA, United States

PATENT ASSIGNEE(S): Iowa State University Research Foundation, Ames,

IA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6537552	B1	20030325
APPLICATION INFO.:	US 2000-692064		20001019 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-160429P	19991019 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Smith, Lynette R. F.	
ASSISTANT EXAMINER:	Shahnan-Shah, Khatol S	
LEGAL REPRESENTATIVE:	Fish & Richardson P.C.	
NUMBER OF CLAIMS:	8	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	10 Drawing Figure(s); 7 Drawing Page(s)	
LINE COUNT:	1611	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention features fusion agents such as fusion proteins that are useful for the treatment of and prevention from diseases that are susceptible to the effects of cellular (Th1 type) immune responses. Also encompassed by the invention are nucleic acids encoding the fusion proteins of the invention, vectors containing the nucleic acids, and cells containing the vectors. The invention includes methods of making and using the fusion agents of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L58 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4

ACCESSION NUMBER: 2003:858058 CAPLUS
DOCUMENT NUMBER: 140:106124
TITLE: The pyruvate dehydrogenase complex of Mycoplasma hyopneumoniae contains a novel lipoyl domain arrangement
AUTHOR(S): Matic, Jake N.; Wilton, Jody L.; Towers, Rebecca J.; Scarman, Anthony L.; Minion, F. Chris
; Walker, Mark J.; Djordjevic, Steve P.
CORPORATE SOURCE: Microbiology and Immunology Section, Elizabeth Macarthur Agricultural Institute, Camden, NSW, Australia
SOURCE: Gene (2003), 319, 99-106
CODEN: GENED6; ISSN: 0378-1119
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The genes encoding the pyruvate dehydrogenase (PDH) complex (pdhA, pdhB, pdhC and pdhD) from Mycoplasma hyopneumoniae have been cloned and sequenced. The genes are arranged into two operons, designated pdhAB and pdhCD, which are not found together in the chromosome. The pdhA, pdhB, pdhC and pdhD genes encode proteins of predicted mol. masses of 44.2 kDa (pyruvate dehydrogenase major subunit; E1 α), 36.6 kDa (pyruvate dehydrogenase minor subunit; E1 β), 33.1 kDa (dihydrolipoyl acetyltransferase; E2) and 66.3 kDa (dihydrolipoyl dehydrogenase; E3), resp. Sequence anal. of the pdhCD operon revealed the presence of a lipoyl-binding domain in pdhD but not in pdhC. The lipoyl domain is believed to act as a "swinging arm" that spans the

gaps between the catalytic domains of each of the subunits. Portions of the N-terminal regions of pdhA and pdhD were expressed as 6+His-tag fusion proteins in *Escherichia coli* and purified by nickel affinity chromatog. The purified proteins were used to raise antibodies in rabbits, and Western blot anal. was performed with the polyclonal rabbit antiserum. Both the pdhA and pdhD genes were expressed among various strains of *M. hyopneumoniae* as well as the porcine mycoplasmas, *Mycoplasma hyorhinis* and *Mycoplasma flocculare*. Southern hybridization anal. using probes from pdhA and pdhD detected one copy of each gene in the chromosome of *M. hyopneumoniae*. Since previous studies have shown pyruvate dehydrogenase activity in *M. hyopneumoniae*, it appears likely that a functional lipoyl-binding domain in the N terminus of PdhC is not an absolute prerequisite for pyruvate dehydrogenase enzyme activity. We hypothesize that the lipoyl-binding domain of PdhD is performing the enzymic function normally attributed to the PdhC lipoyl-binding domain in other organisms. Searches of pyruvate dehydrogenase gene sequences derived from other *Mycoplasma* species showed that a putative lipoyl domain was absent in the pdhC gene from *Mycoplasma pulmonis*. However, like other bacterial species, pdhC gene sequences from *Mycoplasma capricolum*, *Mycoplasma genitalium* and *Mycoplasma pneumoniae* contain a putative lipoyl domain.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5

ACCESSION NUMBER: 2001:93431 CAPLUS

DOCUMENT NUMBER: 135:255714

TITLE: Oral immunization of **swine** with attenuated *Salmonella typhimurium* aroA SL3261 expressing a recombinant antigen of ***Mycoplasma hyopneumoniae*** (NrdF) primes the immune system for a NrdF specific secretory IgA response in the lungs

AUTHOR(S): Fagan, Peter K.; Walker, Mark J.; Chin, James; Eamens, Graeme J.; Djordjevic, Steve P.

CORPORATE SOURCE: Department of Biological Sciences, University of Wollongong, Australia

SOURCE: Microbial Pathogenesis (2001), 30(2), 101-110
CODEN: MIPAEV; ISSN: 0882-4010

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB *Salmonella typhimurium* SL3261 (aroA **mutant**) expressing a recombinant ***Mycoplasma hyopneumoniae*** antigen was used to orally immunize **swine** against **porcine** enzootic pneumonia. This construct, designated S. typhimurium aroA SL3261 (pKF1), expressed a recombinant protein containing the carboxy-terminal 11 kDa of a 42 kDa ***M. hyopneumoniae*** NrdF ribonucleotide reductase R2 subunit protein. Here we demonstrate that this antigen is present in all seven geog. diverse strains of ***M. hyopneumoniae*** tested, and is recognized by the **swine** immune system after exptl. infection with the virulent ***M. hyopneumoniae*** Beaufort strain. The immune response of **swine** orally immunized twice with S. typhimurium SL3261 (pKF1) on day 0 and day 14 was evaluated. Oral immunization with S. typhimurium SL3261 (pKF1) primed the immune system to elicit a significant secretory IgA response against the 15 kDa NrdF antigen in

the respiratory tract of **swine**, post-challenge, compared to control groups. Blood lymphocytes from **swine** immunized with *S. typhimurium* SL3261 (pKF1) proliferated significantly following stimulation with *M. hyopneumoniae* whole-cell exts. compared to control groups 14 days post-vaccination. Following challenge with virulent *M. hyopneumoniae*, **swine** immunized with *S. typhimurium* SL3261 (pKF1) showed higher average daily weight gains and reduced lung pathol. compared to control groups. (c) 2001 Academic Press.

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 9 OF 12 USPATFULL on STN

ACCESSION NUMBER: 2000:170661 USPATFULL

TITLE: Recombinant **mycoplasma hyopneumoniae** vaccine

INVENTOR(S): **Minion, F. Chris**, Ames, IA, United States
Hsu, Tsungda, Bronx, NY, United States

PATENT ASSIGNEE(S): Iowa State University Research Foundation, Inc.,
Ames, IA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6162435		20001219
APPLICATION INFO.:	US 1998-198484		19981124 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-66565P	19971126 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Housel, James O.	
ASSISTANT EXAMINER:	Hines, Ja-Na A.	
LEGAL REPRESENTATIVE:	Dickstein Shapiro Morin & Oshinsky, LLP	
NUMBER OF CLAIMS:	17	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	8 Drawing Figure(s); 8 Drawing Page(s)	
LINE COUNT:	1326	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A **Mycoplasma hyopneumoniae** protein prepared by recombinant DNA or synthetic means, DNA sequences coding for the protein, an expression vector and transformed host containing the DNA sequences, a vaccine based on the protein, a vaccine based on the DNA sequences, methods of treating **swine** to prevent enzootic pneumonia using the vaccines, and diagnostic tests based on the protein or antibodies raised against it for detecting the presence of Mhyo infection in **swine** herds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L58 ANSWER 10 OF 12 USPATFULL on STN

ACCESSION NUMBER: 1998:9321 USPATFULL

TITLE: PCR-based assay for **Mycoplasma hyopneumoniae**

INVENTOR(S): **Artiushin, Sergey**, Ames, IA, United States
Stipkovits, Laszlo, Budapest, Hungary

PATENT ASSIGNEE(S): **Minion, F. Chris**, Ames, IA, United States
Iowa State University Research Foundation, Inc.,

Ames, IA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5712090		19980127
APPLICATION INFO.:	US 1993-62632		19930518 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Arthur, Lisa B.		
LEGAL REPRESENTATIVE:	Dickstein, Shapiro, Morin & Oshinsky, LLP		
NUMBER OF CLAIMS:	14		
EXEMPLARY CLAIM:	1,6		
NUMBER OF DRAWINGS:	4 Drawing Figure(s); 2 Drawing Page(s)		
LINE COUNT:	820		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed herein is a PCR-based assay for **Mycoplasma hyopneumoniae**, a species-specific primer pair for use in the assay, and a related diagnostic kit. The primer pair is made up of an oligonucleotide having the nucleotide sequence 5'-AAGTTCATTTCGCGCTAGCCC-3' and an oligonucleotide having the nucleotide sequence 5'-GCTCCTACTCCATATTGCCC-3'. Preferably, the kit contains an oligonucleotide probe having the sequence 5'-GGTAGCCCTTCCTTTGAGGT-3'.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L58 ANSWER 11 OF 12 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation
on STN

ACCESSION NUMBER: 1997:296325 BIOSIS
DOCUMENT NUMBER: PREV199799595528
TITLE: Oral immunization of mice with attenuated *Salmonella typhimurium* aroA expressing a recombinant **Mycoplasma hyopneumoniae** antigen (NrdF).
AUTHOR(S): Fagan, Peter K.; Djordjevic, Steve P.; Chin, James; Eamens, Graeme J.; Walker, Mark J. [Reprint author]
CORPORATE SOURCE: Dep. Biol. Sci., Univ. Wollongong, Wollongong, Camden, New South Wales, Australia
SOURCE: Infection and Immunity, (1997) Vol. 65, No. 6, pp. 2502-2507.
CODEN: INFIBR. ISSN: 0019-9567.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Jul 1997
Last Updated on STN: 5 Aug 1997

AB **Mycoplasma hyopneumoniae** is the etiological agent of **porcine** enzootic pneumonia, a commercially expensive respiratory disease of **swine**. *Salmonella typhimurium* SL3261 was used as a live carrier of plasmid pKF1, which encodes a 15-kDa recombinant **M. hyopneumoniae** protein. This expressed recombinant protein consists of the carboxy-terminal 11 kDa of a 42-kDa **M. hyopneumoniae** NrdF ribonucleotide reductase R2 subunit protein. Rabbit anti-15-kDa serum was able to inhibit the growth of viable **M. hyopneumoniae** J in vitro. When used as a live oral vaccine, *S. typhimurium* SL3261(pKF1) induced a significant secretory immunoglobulin A immune response in the lungs of mice orally immunized against the **M. hyopneumoniae** antigen. Utilization of live oral vaccines

expressing potentially protective *M. hyopneumoniae* proteins, such as the NrdF antigen, which can stimulate a lung mucosal response against surface-accessible proteins may provide a cost-effective alternative to the present control strategies used for porcine enzootic pneumonia.

L58 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6

ACCESSION NUMBER: 1997:117930 CAPLUS
 DOCUMENT NUMBER: 126:182057
 TITLE: Cloning and functional analysis of the P97
 swine cilium adhesin gene of
Mycoplasma hyopneumoniae
 AUTHOR(S): Hsu, Tsungda; Artiushin, Sergey; Minion, F.
 Chris
 CORPORATE SOURCE: Veterinary Medical Research Institute, Iowa State
 University, Ames, IA, 50011, USA
 SOURCE: Journal of Bacteriology (1997), 179(4), 1317-1323
 CODEN: JOBAAY; ISSN: 0021-9193
 PUBLISHER: American Society for Microbiology
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Colonization of the swine respiratory tract by *Mycoplasma hyopneumoniae* is accomplished by specific binding to the cilia of the mucosal epithelial cells. Previous studies have implicated a 97-kDa outer membrane-associated protein, P97, that appeared to mediate this interaction. To further define the role of P97 in adherence to porcine cilia, the structural gene was cloned and sequenced, and the recombinant products were analyzed. Monoclonal antibodies were used to identify recombinant clones in a genomic library expressed in an opal suppressor host because of alternate codon usage by mycoplasmas. The gene coding for P97 was then identified by Tn1000 mutagenesis of a recombinant clones. DNA sequence anal. revealed an open reading frame coding for a 124.9-kDa protein with a hydrophobic transmembrane spanning domain. The N-terminal sequence of purified P97 mapped at amino acid position 195 of the translated sequence, indicating that a processing event had occurred in *M. hyopneumoniae*. Both recombinant P97 protein expressed in an Escherichia coli opal suppressor host and *M. hyopneumoniae* bound specifically two swine cilia, and the binding was inhibited by heparin and fucoidan, thus supporting the hypothesis that P97 was actively involved in binding to swine cilia in vivo.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

FILE 'HOME' ENTERED AT 12:37:15 ON 22 NOV 2005

FILE 'HOME' ENTERED AT 11:43:02 ON 22 NOV 2005
D COST

FILE 'HCAPLUS' ENTERED AT 12:18:12 ON 22 NOV 2005

L18 . 34 SEA ABB=ON PLU=ON (MYCOPLASM? OR M) (W) HYOPNEUMON? AND
(MUTAT? OR MUTANT? OR MUTAGEN? OR POLYMORPH? OR POLY
MORPH?)
L19 5 SEA ABB=ON PLU=ON L18 AND IMMUNOGEN?
L20 20 SEA ABB=ON PLU=ON L18 AND (SWINE OR PORCINE OR PIG OR
HOG OR PIGLET)
D KWIC
L*** DEL 3 S MINION ?/AU AND L20
D TI AU 1-3
L*** DEL 1 S L21 AND VECTOR
D TI AU
D KWIC
L21 8 SEA ABB=ON PLU=ON L20 AND VECTOR
L22 2 SEA ABB=ON PLU=ON L18 AND ADMIN?
D QUE L19
D QUE L21
D QUE L22
L23 13 SEA ABB=ON PLU=ON L19 OR L21 OR L22
D 1-13 .BEVERLY

FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB' ENTERED AT 12:22:22
ON 22 NOV 2005

L24 120 SEA ABB=ON PLU=ON L18
L25 17 SEA ABB=ON PLU=ON L24 AND IMMUNOGEN?
L26 84 SEA ABB=ON PLU=ON L24 AND (PORCINE OR PIG OR PIGLET OR
SWINE OR HOG)
L27 10 SEA ABB=ON PLU=ON L26 AND VECTOR
L28 7 SEA ABB=ON PLU=ON L24 AND ADMIN?
L29 28 SEA ABB=ON PLU=ON L25 OR L27 OR L28
L30 12 DUP REM L29 (16 DUPLICATES REMOVED)
D 1-12 IBIB ABS

FILE 'MEDLINE' ENTERED AT 12:24:05 ON 22 NOV 2005

E MYCOPLASMA HYOPNEUMONIAE/CT 5
L31 43 SEA ABB=ON PLU=ON "MYCOPLASMA HYOPNEUMONIAE"/CT
E MUTANTS/CT 5
E MUTANT/CT 5
E MUTAGENESIS/CT 5
L32 18814 SEA ABB=ON PLU=ON MUTAGENESIS/CT
E POLYMORPHISM/CT
L33 54271 SEA ABB=ON PLU=ON "POLYMORPHISM, GENETIC"/CT
L34 0 SEA ABB=ON PLU=ON L31 AND (L32 OR L33)
E SWINE/CT 5
L35 124920 SEA ABB=ON PLU=ON SWINE/CT
L36 39 SEA ABB=ON PLU=ON L31 AND L35
L37 4 SEA ABB=ON PLU=ON L36 AND ADMINISTRATION & DOSAGE/CT

Searcher : Shears 571-272-2528

10/607631

E IMMUNOGENICITY/CT 5
E VECTORS/CT 5
E VECTOR/CT 5
D QUE L34
D QUE L37
D L37 1-4 .BEVERLYMED

FILE 'USPATFULL' ENTERED AT 12:27:17 ON 22 NOV 2005

L38 133 SEA ABB=ON PLU=ON ((MYCOPLASM? OR M) (W)HYOPNEUMON?) (L) (MU
TAT? OR MUTANT? OR MUTAGEN? OR POLYMORPH? OR POLY MORPH?)
L39 82 SEA ABB=ON PLU=ON L38 (L) IMMUNOGEN?
L40 75 SEA ABB=ON PLU=ON L39 (L) (PORCINE OR PIG OR PIGLET OR
SWINE OR HOG)
L41 67 SEA ABB=ON PLU=ON L40 (L) VECTOR
L42 63 SEA ABB=ON PLU=ON L41 (L) ADMIN?
L43 60 SEA ABB=ON PLU=ON L42 (L) (PURE OR PURIF?)
L44 59 SEA ABB=ON PLU=ON L43 (L) (IMMUNORESPONS? OR IMMUN? (3A) RESP
ONS?)
L45 24 SEA ABB=ON PLU=ON ((MYCOPLASM? OR M) (W)HYOPNEUMON?) (S) (MU
TAT? OR MUTANT? OR MUTAGEN? OR POLYMORPH? OR POLY MORPH?)
L46 3 SEA ABB=ON PLU=ON L45 (S) IMMUNOGEN?
L47 7 SEA ABB=ON PLU=ON L45 (S) (PORCINE OR HOG OR PIG OR PIGLET
OR SWINE)
L48 3 SEA ABB=ON PLU=ON L45 (S) VECTOR
L49 2 SEA ABB=ON PLU=ON L45 (S) ADMIN?
L50 10 SEA ABB=ON PLU=ON L46 OR L47 OR L48 OR L49
D 1-10 IBIB ABS

FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB, USPATFULL' ENTERED AT
12:32:14 ON 22 NOV 2005

L51 412 SEA ABB=ON PLU=ON ("MINION F"? OR "MINION C"?)/AU
L52 760 SEA ABB=ON PLU=ON "DJORDJEVIC S"?/AU
L53 14 SEA ABB=ON PLU=ON L51 AND L52
L54 1158 SEA ABB=ON PLU=ON L51 OR L52
L*** DEL 60 S L54 AND 18
L*** DEL 25 S L55 AND (SWINE OR PIG OR PIGLET OR HOG OR PORCINE)
L*** DEL 38 S L53 OR L56
L*** DEL 14 DUP REM L57 (24 DUPLICATES REMOVED)
D 1-14 IBIB ABS

FILE 'HOME' ENTERED AT 12:35:01 ON 22 NOV 2005

FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB, USPATFULL' ENTERED AT
12:36:01 ON 22 NOV 2005

L55 32 SEA ABB=ON PLU=ON L54 AND L18
L56 24 SEA ABB=ON PLU=ON L55 AND (SWINE OR PIG OR PIGLET OR HOG
OR PORCINE)
L57 35 SEA ABB=ON PLU=ON L53 OR L56
L58 12 DUP REM L57 (23 DUPLICATES REMOVED)
D 1-12 IBIB ABS

FILE 'HOME' ENTERED AT 12:37:15 ON 22 NOV 2005

FILE HOME

FILE REGISTRY

Searcher : Shears 571-272-2528

10/607631

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 21 NOV 2005 HIGHEST RN 868586-21-4
DICTIONARY FILE UPDATES: 21 NOV 2005 HIGHEST RN 868586-21-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Structure search iteration limits have been increased. See HELP SLIMI for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

FILE HCAPLUS

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 22 Nov 2005 VOL 143 ISS 22
FILE LAST UPDATED: 21 Nov 2005 (20051121/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE MEDLINE

FILE LAST UPDATED: 16 NOV 2005 (20051116/UP). FILE COVERS 1950 TO DA

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

Searcher : Shears 571-272-2528

10/607631

<http://www.nlm.nih.gov/mesh/>
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS

FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 16 November 2005 (20051116/ED)

FILE EMBASE

FILE COVERS 1974 TO 17 Nov 2005 (20051117/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE WPIDS

FILE LAST UPDATED: 17 NOV 2005 <20051117/UP>

MOST RECENT DERWENT UPDATE: 200574 <200574/DW>

DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
PLEASE VISIT:

http://www.stn-international.de/training_center/patents/stn_guide.pdf

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
<http://thomsonderwent.com/coverage/latestupdates/> <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
GUIDES, PLEASE VISIT:
<http://thomsonderwent.com/support/userguides/> <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT
DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX
FIRST VIEW - FILE WPIFV.
FOR FURTHER DETAILS: <http://www.thomsonderwent.com/dwpifv> <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
PLEASE CHECK:
<http://thomsonderwent.com/support/dwpioref/reftools/classification/code>
FOR DETAILS. <<<

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html <

FILE CONFSCI

FILE COVERS 1973 TO 25 May 2005 (20050525/ED)

Searcher : Shears 571-272-2528

10/607631

FILE JICST-EPLUS
FILE COVERS 1985 TO 21 NOV 2005 (20051121/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED
TERM (/CT) THESAURUS RELOAD.

FILE JAPIO
FILE LAST UPDATED: 4 NOV 2005 <20051104/UP>
FILE COVERS APR 1973 TO JULY 28, 2005

<<< GRAPHIC IMAGES AVAILABLE >>>

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html <

FILE PHIC
FILE COVERS CURRENT RECORDS AND IS UPDATED DAILY
FILE LAST UPDATED: 21 NOV 2005 (20051121/ED)

FILE PHIN
FILE COVERS 1980 TO 18 NOV 2005 (20051118/ED)

FILE TOXCENTER

FILE COVERS 1907 TO 22 Nov 2005 (20051122/ED)

This file contains CAS Registry Numbers for easy and accurate substance
identification.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TOXCENTER has been enhanced with new file segments and search fields.
See HELP CONTENT for more information.

TOXCENTER thesauri in the /CN, /CT, and /MN fields incorporate the
MeSH 2005 vocabulary. See <http://www.nlm.nih.gov/mesh/> and
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html for a
description of changes.

FILE CANCERLIT
FILE COVERS 1963 TO 15 Nov 2002 (20021115/ED)

On July 28, 2002, CANCERLIT was reloaded. See HELP RLOAD for details

CANCERLIT thesauri in the /CN, /CT, and /MN fields incorporate the
MeSH 2002 vocabulary. Enter HELP THESAURUS for details.

This file contains CAS Registry Numbers for easy and accurate substance
identification.

FILE VETU
FILE LAST UPDATED: 02 JAN 2002 <20020102/UP>
FILE COVERS 1983-2001

FILE VETB
FILE LAST UPDATED: 25 SEP 94 <940925/UP>

Searcher : Shears 571-272-2528

10/607631

FILE COVERS 1968-1982

FILE CABA

FILE COVERS 1973 TO 3 Nov 2005 (20051103/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

The CABA file was reloaded 7 December 2003. Enter HELP RLOAD for deta

FILE AGRICOLA

FILE COVERS 1970 TO 4 Nov 2005 (20051104/ED)

Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted material. All rights reserved. (2005)

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE PASCAL

FILE LAST UPDATED: 21 NOV 2005 <20051121/UP>

FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE
IN THE BASIC INDEX (/BI) FIELD <<<

FILE DISSABS

FILE COVERS 1861 TO 26 OCT 2005 (20051026/ED)

Only fair use as provided by the United States copyright law is permitted. PROQUEST INFORMATION AND LEARNING COMPANY MAKES NO WARRANTY REGARDING THE ACCURACY, COMPLETENESS OR TIMELINESS OF THE LICENSED MATERIALS OR ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND SHALL NOT BE LIABLE FOR DAMAGES OF ANY KIND OR LOST PROFITS OR OTHER CLAIMS RELATED TO THE LICENSED MATERIALS OR THEIR USE.

FILE FEDRIP

FILE COVERS CURRENT DATA. LAST UPDATE: 8 NOV 2005 (20051108/ED)

Compiled and distributed by the NTIS, U.S. Department of Commerce. It contains copyrighted material. All rights reserved. 2005.

FILE SCISEARCH

FILE COVERS 1974 TO 17 Nov 2005 (20051117/ED)

SCISEARCH has been reloaded, see HELP RLOAD for details.

FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 22 Nov 2005 (20051122/PD)

FILE LAST UPDATED: 22 Nov 2005 (20051122/ED)

HIGHEST GRANTED PATENT NUMBER: US6968571

HIGHEST APPLICATION PUBLICATION NUMBER: US2005257307

Searcher : Shears 571-272-2528

10/607631

CA INDEXING IS CURRENT THROUGH 22 Nov 2005 (20051122/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 22 Nov 2005 (20051122/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2005

>>> USPAT2 is now available. USPATFULL contains full text of the
>>> original, i.e., the earliest published granted patents or
>>> applications. USPAT2 contains full text of the latest US
>>> publications, starting in 2001, for the inventions covered in
>>> USPATFULL. A USPATFULL record contains not only the original
>>> published document but also a list of any subsequent
>>> publications. The publication number, patent kind code, and
>>> publication date for all the US publications for an invention
>>> are displayed in the PI (Patent Information) field of USPATFULL
>>> records and may be searched in standard search fields, e.g., /PN,
>>> /PK, etc.

>>> USPATFULL and USPAT2 can be accessed and searched together
>>> through the new cluster USPATALL. Type FILE USPATALL to
>>> enter this cluster.

>>>
>>> Use USPATALL when searching terms such as patent assignees,
>>> classifications, or claims, that may potentially change from
>>> the earliest to the latest publication.

This file contains CAS Registry Numbers for easy and accurate
substance identification.

FILE CAPLUS

Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
American Chemical Society and is provided to assist you in searching
databases on STN. Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS, is
strictly prohibited.

FILE COVERS 1907 - 22 Nov 2005 VOL 143 ISS 22
FILE LAST UPDATED: 21 Nov 2005 (20051121/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply
They are available for your review at:

<http://www.cas.org/infopolicy.html>

10/607631

=> d his; d cost

(FILE 'HOME' ENTERED AT 11:29:38 ON 22 NOV 2005)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 11:29:44 ON 22 NOV 2005

E AP 920/CN 5
L1 1 S E3
E AP920/CN 5
E "PORICNE PLASMA ALBUMIN"/CN 5
E "PORICNE PLASMA"/CN 5
E "SWINE PLASMA ALBUMIN"/CN 5
E "SWINE PLASMA"/CN 5
E "ALBUMIN, PORCINE"/CN 5
E "ALBUMIN, SWINE"/CN 5

FILE 'HCAPLUS' ENTERED AT 11:31:04 ON 22 NOV 2005

L2 11268 S (PORCINE OR SWINE OR PIG OR HOG) (S) (PLASMA OR BLOOD MEAL
L3 15 S L2 AND (CRUSTACEA? OR PRAWN OR LOBSTER OR CRAB OR SHRIMP
L4 15 S (L2 OR (SBM OR PBM) (S) BLOOD MEAL) AND (CRUSTACEA? OR PRAW

FILE 'REGISTRY' ENTERED AT 11:34:38 ON 22 NOV 2005

FILE 'HCAPLUS' ENTERED AT 11:34:38 ON 22 NOV 2005

FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, JICST-EPLUS, JAPIO,
PHIC, PHIN, TOXCENTER, CANCERLIT, VETU, VETB, CABA, AGRICOLA, PASCAL,
DISSABS, FEDRIP' ENTERED AT 11:34:40 ON 22 NOV 2005

L5 40 S L4
L6 35 DUP REM L5 (5 DUPLICATES REMOVED)

FILE 'MEDLINE' ENTERED AT 11:36:36 ON 22 NOV 2005

L7 8 S (CRUSTACEA AND (IMMUNITY OR ALBUMINS))/CT

FILE 'HCAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, JICST-EPLUS,
JAPIO, PHIC, PHIN, TOXCENTER, CANCERLIT, VETU, VETB, CABA, AGRICOLA,
PASCAL, DISSABS, FEDRIP' ENTERED AT 11:38:05 ON 22 NOV 2005

L8 24797 S ("HATTORI T"? OR "TSUNEO H"?) /AU
L9 65101 S ("TAKAHASHI Y"? OR "YUKINORI T"?) /AU
L10 1302 S ("TACHIKAWA Y"? OR "YOSHIHIRO T"?) /AU
L11 4 S L8 AND L9 AND L10
L12 77 S L8 AND (L9 OR L10)
L13 4 S L9 AND L10
L14 37 S (L12 OR L8 OR L9 OR L10) AND (L2 OR SBM OR PBM)
L15 5 S (L12 OR L8 OR L9 OR L10) AND L4
L16 5 S L11 OR L13 OR L15
L17 3 DUP REM L16 (2 DUPLICATES REMOVED)

FILE 'HOME' ENTERED AT 11:43:02 ON 22 NOV 2005

FILE 'HCAPLUS' ENTERED AT 12:18:12 ON 22 NOV 2005

L18 34 S (MYCOPLASM? OR M) (W) HYOPNEUMON? AND (MUTAT? OR MUTANT? OR
L19 5 S L18 AND IMMUNOGEN?
L20 20 S L18 AND (SWINE OR PORCINE OR PIG OR HOG OR PIGLET)
L21 8 S L20 AND VECTOR
L22 2 S L18 AND ADMIN?
L23 13 S L19 OR L21 OR L22

FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,

Searcher : Shears 571-272-2528

10/607631

JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB' ENTERED AT 12:22:22
ON 22 NOV 2005

L24 120 S L18
L25 17 S L24 AND IMMUNOGEN?
L26 84 S L24 AND (PORCINE OR PIG OR PIGLET OR SWINE OR HOG)
L27 10 S L26 AND VECTOR
L28 7 S L24 AND ADMIN?
L29 28 S L25 OR L27 OR L28
L30 12 DUP REM L29 (16 DUPLICATES REMOVED)

FILE 'MEDLINE' ENTERED AT 12:24:05 ON 22 NOV 2005

E MYCOPLASMA HYOPNEUMONIAE/CT 5
L31 43 S E3
E MUTANTS/CT 5
E MUTANT/CT 5
E MUTAGENESIS/CT 5
L32 18814 S E3
E POLYMORPHISM/CT
L33 54271 S E5
L34 0 S L31 AND (L32 OR L33)
E SWINE/CT 5
L35 124920 S E3
L36 39 S L31 AND L35
L37 4 S L36 AND ADMINISTRATION & DOSAGE/CT
E IMMUNOGENICITY/CT 5
E VECTORS/CT 5
E VECTOR/CT 5

FILE 'USPATFULL' ENTERED AT 12:27:17 ON 22 NOV 2005

L38 133 S ((MYCOPLASM? OR M) (W)HYOPNEUMON?) (L) (MUTAT? OR MUTANT? OR
L39 82 S L38 (L)IMMUNOGEN?
L40 75 S L39 (L) (PORCINE OR PIG OR PIGLET OR SWINE OR HOG)
L41 67 S L40 (L)VECTOR
L42 63 S L41 (L)ADMIN?
L43 60 S L42 (L) (PURE OR PURIF?)
L44 59 S L43 (L) (IMMUNORESPONS? OR IMMUN? (3A)RESPONS?)
L45 24 S ((MYCOPLASM? OR M) (W)HYOPNEUMON?) (S) (MUTAT? OR MUTANT? OR
L46 3 S L45 (S)IMMUNOGEN?
L47 7 S L45 (S) (PORCINE OR HOG OR PIG OR PIGLET OR SWINE)
L48 3 S L45 (S)VECTOR
L49 2 S L45 (S)ADMIN?
L50 10 S L46 OR L47 OR L48 OR L49

FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB, USPATFULL' ENTERED AT
12:32:14 ON 22 NOV 2005

L51 412 S ("MINION F"? OR "MINION C"?)/AU
L52 760 S "DJORDJEVIC S"?/AU
L53 14 S L51 AND L52
L54 1158 S L51 OR L52

FILE 'HOME' ENTERED AT 12:35:01 ON 22 NOV 2005

FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH,
JICST-EPLUS, JAPIO, CABA, AGRICOLA, VETU, VETB, USPATFULL' ENTERED AT
12:36:01 ON 22 NOV 2005

L55 32 S L54 AND L18
L56 24 S L55 AND (SWINE OR PIG OR PIGLET OR HOG OR PORCINE)
L57 35 S L53 OR L56